

monitoring or modeling data which results in a complete record, i.e., 365 days per year.

The expected annual mean is estimated as the average of three or more annual means. This multi-year estimate, expressed in $\mu\text{g}/\text{m}^3$, shall be rounded to the nearest integer for comparison with the annual standard (fractional values of 0.5 should be rounded up).

$$\bar{x} = (1/4) \times (52.4 + 75.3 + 82.1 + 63.2) = 68.25 \text{ or } 68.3$$

4.2 Adjustments for Non-scheduled Sampling Days.

An adjustment in the calculation of the annual mean is needed if sampling is performed on days in addition to the days specified by the systematic sampling schedule. For the same reasons given in the discussion of estimated exceedances (Section 3.2), the quarterly averages would be calculated by using the following formula:

$$\bar{x}_q = (1/m_q) \times \sum_{j=1}^{m_q} \frac{k_j}{i=1} (x_{ij}/k_j) \quad [6]$$

Example 4

Using formula [4], the quarterly means are calculated for each calendar quarter. If the quarterly means are 52.4, 75.3, 82.1, and 63.2 $\mu\text{g}/\text{m}^3$, then the annual means is

where

\bar{x}_q = the quarterly mean concentration for quarter q , $q=1, 2, 3$, or 4 .

x_{ij} = the i th concentration value recorded in stratum j .

$$\bar{x}_q = (1/7) \times [(1/3) \times (202 + 242 + 180) + 55 + 68 + 73 + 92 + 120 + 155] = 110.1$$

Although 24-hour measurements are rounded to the nearest 10 $\mu\text{g}/\text{m}^3$ for determinations of exceedances of the 24-hour standard, note that these values are rounded

k_j = the number of actual samples in stratum j , and
 m_q = the number of strata with data in the quarter.

If one sample value is recorded in each stratum, formula [6] reduces to a simple arithmetic average of the observed values as described by formula [4].

Example 5

During one calendar quarter, 9 observations were recorded. These samples were distributed among 7 sampling strata, with 3 observations in one stratum. The concentrations of the 3 observations in the single stratum were 202, 242, and 180 $\mu\text{g}/\text{m}^3$. The remaining 6 observed concentrations were 55, 68, 73, 92, 120, and 155 $\mu\text{g}/\text{m}^3$. Applying the weighting factors specified in formula [6], the quarterly mean is

to the nearest 1 $\mu\text{g}/\text{m}^3$ for the calculation of means.

[FR Doc. 87-13707 Filed 6-30-87; 8:45 am]

BILLING CODE 6560-50-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 50

[AD FRL-3141-9(b)]

Air Programs; Review of the National Secondary Ambient Air Quality Standards for Particulate Matter

AGENCY: Environmental Protection Agency.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: The Environmental Protection Agency is soliciting public comment regarding the development of a new secondary national ambient air quality standard (NAAQS) for fine particles (those particles less than 2.5 micrometers (μm) in aerodynamic diameter). This action represents a continuation of the review process for the secondary standards for particulate matter discussed by the Agency on March 20, 1984 (49 FR 10408). The principal welfare effect to be addressed by such a standard is impairment of visibility.

DATE: Written comments pertaining to the issues raised in this notice must be received by September 29, 1987.

ADDRESSES: Submit all comments (duplicate copies are preferred) to: Central Docket Section (A-130), Environmental Protection Agency, Attn: Docket No. A-86-19, 401 M Street SW., Washington, DC 20460. This docket is located in the Central Docket Section at the U.S. Environmental Protection Agency, South Conference Center, Room 4, 401 M Street SW., Washington, DC. The docket may be inspected between 8:00 a.m. and 3:00 p.m. on weekdays. A reasonable fee may be charged for copying. For the availability of related information, see **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: Mr. John Haines, Strategies and Air Standards Division (MD-12), U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711, telephone (919) 541-5531 (FTS 629-5531).

SUPPLEMENTARY INFORMATION:

Availability of Related Information

The revised criteria document, Air Quality Criteria for Particulate Matter and Sulfur Oxides (three volumes, EPA-600/8-82-029af-cf, December, 1982; Volume I NTIS #PB-84-120401, \$24.95 paper copy and \$6.50 microfiche; Volume II NTIS #PB-84-120419, \$48.95 paper copy and \$6.50 microfiche; Volume III NTIS #PB-84-120427, \$48.95 paper copy and \$13.50 microfiche) and

the final revised staff paper, Review of the National Ambient Air Quality Standards for Particulate Matter: Assessment of Scientific and Technical Information-OAQPS Staff Paper (EPA-450/5-82-001, January, 1982; NTIS #PB-177874, \$24.95 paper copy and \$6.50 microfiche), are available from: U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (add \$3.00 handling charge per order). A limited number of copies of other documents generated in connection with this review, such as the Visibility Task Force report, can be obtained from: U.S. Environmental Protection Agency Library (MD-35), Research Triangle Park, N.C. 27711, telephone (919) 541-2777 (FTS 629-2777).

Background

On March 20, 1984 (49 FR 10408), the Environmental Protection Agency proposed revisions to the NAAQS for particulate matter under section 109 of the Clean Air Act, 42 USC. 7409. In a separate notice in today's **Federal Register** EPA is promulgating final revisions. The revised primary (health) and secondary (welfare) standards are identical and are expressed in terms of an indicator, PM_{10} , that includes only particles less than a nominal 10 μm in diameter.

Section 109(b)(2) of the Clean Air Act, 42 U.S.C. 7409(b)(2), requires that secondary ambient air quality standards specify a level of air quality requisite to "protect the public welfare from any known or anticipated adverse effects" arising from an air pollutant. In the process of reviewing and revising the particulate matter standards, the Agency considered the need for secondary standards to protect the public welfare against the effects of particulate matter on visibility and climate. These effects were found to be most strongly related to regional-scale fine particle levels¹ that result in part from regional sulfur oxide emissions (EPA, 1982b, Friedlander, 1982). For this reason, options for managing regional visibility impairment by fine particles overlap with options for managing the acidic deposition phenomenon. In light of this, EPA deferred a decision on a possible fine particle standard to permit an increased opportunity for developing compatible strategies for these related regional air quality problems (49 FR 10419; March 20, 1984). In announcing this deferral, the Agency also indicated its intent to examine the visibility/fine particle issue, including its relation to

¹ Particles less than a nominal 2.5 micrometers in aerodynamic diameter, or $\text{PM}_{2.5}$.

acid deposition control strategies, and to solicit public comment regarding a possible fine particle standard.

EPA charged an Interagency Task Force with conducting this examination as part of an ongoing evaluation of visibility strategies. The results of the Task Force's effort are contained in a report, "Developing Long-Term Strategies for Regional Haze: Findings and Recommendations of the Visibility Task Force," which is available at the address listed above. In the process of producing this report, the task force commissioned analyses that projected emissions, pollutant concentrations, and visibility for several scenarios. The task force received a number of public comments, including reviews of the draft analyses, recommendations on alternative approaches, and separate technical assessments of relationships between visibility and ambient particulate matter.

The Task Force recommended further consideration of a fine particle standard, but both the Task Force and the commenters raised a number of scientific, analytic, policy, and other questions associated with the development of such a standard. The Agency is hereby soliciting public comment on these and other issues relevant to the possible development of a fine particle standard and is today announcing the establishment of a standards review docket (No. A-86-19) for this purpose. Comments and other materials submitted to the Visibility Task Force have been placed in this docket. Materials from the earlier particulate matter standards review (Docket No. A-83-48) have been incorporated by reference. In order to permit the review and development process to proceed in a timely manner, written comments on these issues should be submitted to the Docket no later than September 29, 1987.

Major Issues

The 1982 staff assessment of the scientific and technical information on visibility and fine particles (EPA, 1982), and the more recent findings of the Interagency Task Force Assessment (EPA, 1985) identified a number of important issues to be addressed in considering a possible fine particle standard. The most important issues include the following.

1. Basis for Determining Appropriate Level of Protection

A. Regional Character of Visibility

A major difficulty in setting a national standard to protect visibility is evidence

that both the extent of visibility impairment and the value people place on visibility vary widely with affected populations, region of the country, and settings within each region. A single national air quality standard might not reasonably or effectively address all facets of the visibility problem. In particular, a national standard set at a level to protect current excellent visibility found in pristine areas of the western U.S. might require particle levels lower than natural background in the East. Because other Clean Air Act mechanisms² provide means for protecting visibility in non-urban areas of the West, EPA staff and the Interagency Task Force have recommended that a national standard establish visibility goals for those regions in the East affected by regional haze of multistate origin and those major western urban centers affected by haze predominantly of local origin. EPA solicits comment on the appropriateness of such an overall focus for standard setting.

B. Judgments on Adverse Effects

Section 109 of the Act requires that secondary NAAQS specify a level of air quality "requisite to protect the public welfare. . . ." Determining what level of visibility protection is requisite to protect the public welfare is quite difficult, and is complicated by intra-regional variability, by uncertainties in both the value and perception associated with visibility improvements or decrements, and by uncertainties in the relation of current or projected impairment to natural background. Recent information on these issues is summarized in the Visibility Task Force Report (EPA, 1985).

Alternative approaches that have been advanced for setting a visibility protection standard include:

(i) Setting the standard at a level that would ensure visibility is not perceptibly degraded from estimated natural background conditions.

(ii) Determining the level through a comparison of benefits of visibility and other environmental improvements with the costs of control.

(iii) Setting the standard at a level that would maintain current conditions.

The Agency has already received a number of comments relevant to the second alternative, that of considering costs as one of the factors to be examined in setting secondary standards, in response to a request made in conjunction with the proposed NAAQS for particulate matter (49 FR 10408). In that notice, EPA details the reasons why it may be appropriate to consider costs in secondary standards (49 FR 10417-10418). Based on that rationale and the comments received to date, the Administrator intends to give serious consideration to this possibility in the process of reaching a decision on a secondary standard for fine particles. Accordingly, EPA is exploring alternative approaches and techniques in this area. The Agency encourages full public comment on the desirability and appropriateness of considering costs in secondary standards, as well as on the particular approaches listed above, and on any alternatives. EPA also solicits public comment on the adequacy of the current scientific and technical bases for applying these approaches to setting a fine particle standard.

2. Pollutant-Visibility and Source-Receptor Relationships

Staff recommendations for consideration of a fine particle standard were based on the documented quantitative relationships between ambient particulate matter and visibility summarized in Chapter 9 of the criteria document (EPA, 1982a) and in Appendix C of the staff paper (EPA, 1982b). A number of uncertainties exist in these relationships of potential importance in determining both the levels and measurement principles to be used in the appropriate standard. Even more uncertainties exist in characterizing and predicting relationships between emissions and ambient concentrations of important components of fine particles. A comprehensive summary of recent information on these issues was submitted by the Utility Air Regulatory Group (UARG) in a report entitled "Assessment of the Technical Basis Regarding Regional Haze and Visibility Impairment," a copy of which has been placed in the Docket.

EPA solicits comments on the implications of these uncertainties for EPA's ability to set, and the states' ability to implement, ambient standards and on the extent to which the UARG report accurately reflects the latest scientific information in these areas.

3. Timing With Respect to Related Strategies

As noted above, a decision on a visibility-based fine particle standard was deferred to provide adequate time for consideration of the compatibility of, or potential conflict between, additional sulfur control programs initiated for the management of visibility and those initiated for the management of acid deposition. A decision on the need for additional emission controls for acid deposition has been deferred because of a lack of adequate scientific understanding. Scientific research is currently underway which should adequately address these uncertainties. However, the general direction or timing of an acid deposition control decision cannot be predicted prior to reviewing the results of this research now in progress.

Because of the time required to fully assess the scientific information, to establish a new secondary standard for particulate matter to protect visibility, and to develop and approve State implementation plans under section 110 of the Clean Air Act, it could take a number of years before actual implementation of control strategies begins. Given the uncertainty in the timing of an acid deposition control decision, it may be prudent to consider now the development of a secondary fine particulate standard for the purposes of protecting and maintaining visibility. It is possible that most of the potential conflicts or inefficiencies which might arise between the two programs can be adequately addressed during their implementation phases. EPA solicits public comment on the desirability of proceeding with this approach.

List of Subjects in 40 CFR Part 50

Intergovernmental relations, Air pollution control, Carbon monoxide, Ozone, Sulfur oxides, Particulate matter, Nitrogen dioxide, Lead.

Dated: June 2, 1987.

Lee M. Thomas,
Administrator.

[FR Doc. 87-13708 Filed 6-30-87; 8:45 am]

BILLING CODE 6560-50-M

² Section 169A of the Act establishes a national goal of protecting visibility in mandatory Federal Class I areas (certain national parks, and wilderness areas). Section 165(d) (Prevention of Significant Deterioration) provides for consideration of visibility impairment in siting new sources near such areas. The comparatively high density and distribution of Class I areas in the west led to the suggestion that use of these mechanisms could protect visibility in the west generally. Conversely, the sparsity of Class I areas in the east led the task force to recommend an ambient standard as a more appropriate approach for dealing with regional haze in the east.

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Parts 51 and 52**

[AD-FRL-3141-9(c)]

Regulations for Implementing Revised Particulate Matter Standards**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: To implement revised national ambient air quality standards (NAAQS) for particulate matter, proposed March 20, 1984 (49 FR 10408), EPA proposed revisions to 40 CFR Parts 51, 52, and 81 on April 2, 1985 (50 FR 13130). Part 51 establishes requirements for preparation, adoption, and submittal of State implementation plans (SIP's); Part 52 sets forth the Administrator's approval and promulgation of implementation plans; and Part 81 sets forth air quality planning area designations. Today's action promulgates revisions to Parts 51 and 52 as of July 31, 1987 and announces EPA's final policies for revising SIP's to account for the revised NAAQS for particulate matter. The proposed revisions to Part 81 area designations are withdrawn.

EFFECTIVE DATE: This action is effective July 31, 1987.

ADDRESSES: Material relevant to the SIP policies, guidance, and regulations being promulgated today can be found in Public Docket No. A-82-38. This docket also includes material relevant to the retention of total suspended particulate (TSP) increments and other components of the prevention of significant deterioration (PSD) program originally submitted to Docket No. A-83-48 and other dockets listed below. Material pertinent to related revisions being promulgated today are contained in the following dockets:

- a. The particulate matter standards in 40 CFR Part 50, Docket No. A-82-37;
- b. Ambient air monitoring reference and equivalent methods in 40 CFR Part 53, Docket No. A-82-43;
- c. Ambient air quality surveillance for particulate matter in 40 CFR Part 58, Docket No. A-83-13.

The dockets are located at the U.S. EPA Central Docket Section in South Conference Center, Room 4, 401 M Street SW., Washington, DC 20460. The docket may be inspected between 8:00 a.m. and 3:00 p.m. on weekdays, and a reasonable fee may be charged for copying.

Availability of Related Information

The EPA prepared the following

guidelines to assist States in revising their SIP's in response to the revised particulate matter NAAQS.

- PM₁₀ SIP Development Guideline, EPA 450/2-86-001;
- Procedures for Estimating Probability of Nonattainment of a PM₁₀ NAAQS Using Total Suspended Particulate or PM₁₀ Data, EPA 450/4-86-017;
- Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), EPA 450/4-87-007.

Copies of these guidelines are being sent to State and local air pollution control agencies. They are available for inspection and copying at:

- State Air Programs Branch, EPA, Region I, JFK Federal Building, Boston, Massachusetts 02203.
- Air Programs Branch, EPA, Region II, 26 Federal Plaza, New York, New York 10278.
- Air Programs Branch, EPA, Region III, 841 Chestnut Building, Philadelphia, Pennsylvania 19107.
- Air Programs Branch, EPA, Region IV, 345 Courtland Street NE., Atlanta, Georgia, 30365.
- Air and Radiation Branch, EPA, Region V, 230 South Dearborn Street, Chicago, Illinois 60604.
- Air Programs Branch, EPA, Region VI, Allied Bank Tower 1445 Ross Avenue, Dallas, Texas 75202-2733.
- Air Branch, EPA, Region VII, 726 Minnesota Avenue, Kansas City, Kansas 66101.
- Air Programs Branch, EPA, Region VIII, 999 18th Street, Suite 1300 Denver, Colorado 80202-2413.
- Air Programs Branch, EPA, Region IX, 215 Fremont Street, San Francisco, California 94105.
- Air Programs Branch, EPA, Region X, 1200 6th Avenue, Seattle, Washington 98101.

A limited number of copies can be obtained from the EPA library (MD-35), Research Triangle Park, North Carolina 27711, telephone (919) 541-2777 (FTS 629-2777). Copies can also be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161.

Emission factors for stationary and mobile sources have been published in the following documents:

- Compilation of Air Pollutant Emission Factors, Volume I, Stationary Point And Area Sources, AP-42, Fourth Edition, 9/85, Stock #005-000-00251-7.
- Compilation of Air Pollutant Emission Factors, Volume II, Mobile Sources, AP-42, Fourth Edition, 9/85, Stock #005-000-00252-5.

• AP-42 Supplement A, October 1986. These reports are available from the

Superintendent of Documents, Government Printing Office, Washington, DC 20402.

FOR FURTHER INFORMATION CONTACT:

Kenneth Woodard regarding the SIP program at (919) 541-5351 (FTS 629-5351) and Daniel deRoek regarding the PSD/new source review (NSR) programs at (919) 541-5593 (FTS 629-5593) or write to them at Standards Implementation Branch (MD-15), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

References in this notice are indicated by superscript, lower case letters and are listed at the end of the preamble.

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1. Background

Today's final rules for implementing revised particulate matter standards are the culmination of several actions taken in accordance with sections 108 and 109 of the Clean Air Act (Act). The EPA has reviewed and revised the criteria upon which the original primary and secondary particulate matter standards are based. As a result of its review and revision of the health and welfare criteria, EPA proposed revisions to the particulate matter standards on March 20, 1984 (49 FR 10408). The EPA also proposed at the same time to (1) adopt a new Federal Reference Method (Appendix J to 40 CFR Part 50) for measuring particulate matter with an aerometric diameter of a nominal 10 micrometers or less (PM_{10}) in the ambient air, (2) adopt a new Appendix K to 40 CFR Part 50 to provide guidance on the statistical nature of the revised standards, and (3) revise the regulations concerning Ambient Air Quality Surveillance (40 CFR Part 58). Notices of final rulemaking on those proposed revisions are published elsewhere in today's *Federal Register*. The Administrator's final decision with respect to the specific levels of revised standards for particulate matter include: (1) Changing the indicator for both the primary and secondary standards from TSP to PM_{10} , (2) changing the level of the 24-hour primary standard to 150 micrograms per cubic meter ($\mu g/m^3$) measured as PM_{10} and replacing the deterministic form of the standard with a statistical form, (3) changing the level and form of the annual primary standard to 50 $\mu g/m^3$ expected annual arithmetic mean measured as PM_{10} , (4) establishing secondary 24-hour and annual standards that are identical in level and form to the primary standards.

On April 2, 1985, EPA proposed (50 FR 13130) to revise its regulations governing

SIP programs to account for revisions to the particulate matter standards. In particular, EPA (1) set forth the policy it proposed to follow regarding revisions to SIP's to account for the revised standards; (2) proposed to amend the significant harm and air pollution episode levels for particulate matter; (3) proposed amendments to the regulations for preconstruction review of new and modified sources (new source review) in nonattainment areas and in regulations for PSD; and (4) proposed amendments to Part 81, Designation of Areas.

The remaining sections of this preamble describe EPA's resolution of the issues raised during the rulemaking process. Section II outlines the relevant statutory and regulatory requirements. Section III describes EPA's legal interpretation of the Act's requirements. Section IV sets out the final policies for implementing the revised NAAQS under EPA's SIP program, NSR/PSD programs, and new source performance standards (NSPS) program. Section V summarizes the revised regulations. Section VI presents the major public comments received on the proposal and EPA's response to those comments. The EPA's response to comments not covered herein is included in Docket No. A-82-38.

II. Statutory and Regulatory Requirements

A. Statutory Background

1. State Implementation Plans

In 1970 Congress comprehensively amended the Act to establish a joint State and Federal program to control air pollution. Under sections 108 and 109, EPA is responsible for issuing air quality criteria and proposing and promulgating NAAQS. The States then have primary responsibility for implementing the NAAQS. In broad outline, each State must develop and submit to EPA a plan that provides for attainment and maintenance of each NAAQS as expeditiously as practicable within certain time limits. The EPA must review each plan, termed SIP, and approve or disapprove its provisions. If a State fails to submit a plan, or submits a plan which EPA finds inadequate, EPA may, and in some cases must, promulgate whatever measures are necessary to fill the gap.

a. *Section 110. (1) Timing.* Under section 110(a)(1), each State must adopt and submit a SIP "... within 9 months after the promulgation of a national primary ambient air quality standard (or any revision thereof). ..." Section 110(a)(1) also sets a 9-month deadline for submittal of SIP's for new and

revised secondary NAAQS; however, section 110(b) authorizes the Administrator to extend that deadline for up to 18 months where "necessary."

Under section 110(a)(2)(A), SIP's must provide for attainment of any primary NAAQS "... as expeditiously as practicable but [subject to subsection (e)] in no case later than 3 years from the date of approval of such plan (or any revision thereof to take account of a revised primary standard). . . ." The SIP's for secondary NAAQS must provide for attainment within a "reasonable time."

Section 110(e) allows the Administrator to extend the attainment date for the primary NAAQS for 2 years, if he finds that sources will not be able to comply with their emission limitations within the 3-year deadline because needed technology will not be available. The plan, however, must provide for interim control of the noncomplying sources and controls on all other sources of the same pollutant in the same air quality control region.

(2) *Content of state implementation plans.* A core requirement of section 110 is that each SIP must include:

... emission limitations, schedules and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standard. . . . [section 110(a)(2)(B)]

The remaining subsections of section 110(a)(2) elaborate on this general framework. Specific to today's promulgation:

- Section 110(a)(2)(C) requires the plan to provide for operation of a system that collects and analyzes air quality data.

- Section 110(a)(2)(D) states that each SIP must provide a preconstruction review program consisting of "... a permit or equivalent program for any major emitting facility, within such region as necessary to assure (i) that the national ambient air quality standards are achieved and maintained. . . ."

- Section 110(a)(2)(F) provides that plans must require owners or operators of stationary sources to monitor and report on emissions from their sources.

- Section 110(a)(2)(H) requires each plan to contain a self-correction mechanism in case the plan proves unsatisfactory. The plan must contain provisions that the State will revise the plan:

... from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious means of achieving such primary or secondary standard; or

... whenever the Administrator finds on the basis of information available to him that the plan is substantially inadequate to achieve the national ambient air quality primary or secondary standard which it implements or to otherwise comply with any additional requirements established under the Clean Air Act Amendments of 1977

- Section 110(c)(1)(C) authorizes the Administrator to notify a State that it needs to revise its plan in accordance with the section 110(a)(2)(H) requirements for self correction and to set a deadline for submitting the revision. The deadline must be at least 60 days after the notification, but may be later at the Administrator's discretion.

- Section 110(a)(2)(F)(v) provides that SIP's must contain contingency plans for immediate emission reductions where pollution levels increase to the point of presenting an imminent and substantial endangerment to public health.

(3) *Consequences of failing to submit a state implementation plan.* Section 110 provides for Federal intervention if a State fails to submit an adequate SIP. Under section 110(c)(1), EPA must promulgate plan provisions for a State if the State fails to submit a plan at all, submits a plan that does not meet the section 110 requirements, or fails to comply with a notification under section 110(c)(1)(C)—i.e., a call for a plan revision under the provisions of section 110(a)(2)(H). The EPA must promulgate a substitute plan unless the State in the interim adopts and submits a plan that EPA finds adequate.

Other sections of the Act provide financial incentives for State participation in the SIP development process such as section 105(b), which gives EPA general authority to impose conditions on its grants to air pollution control agencies. Thus, EPA may condition grants on the submittal of satisfactory SIP's or SIP revisions. Beyond that, section 176(b) prohibits EPA from making any grants in any area where the responsible State or local authority "... is not implementing any requirement of an approved or promulgated plan under section 110" This prohibition would apply if a State failed to implement the SIP provision that requires the State to revise its plan under the circumstances stipulated in section 110(a)(2)(H). Thus, if a State fails to respond to a call for a SIP revision under section 110(c)(1)(C), the section 176(b) grant prohibition is applicable.

b. *Part D and Associated Amendments.* In many areas of the country, the original SIP's that were approved and promulgated in the early 1970's failed to bring about attainment

within the statutory deadlines. When Congress revised the Act in August 1977, it added a new Part D and amendments to sections 107 and 110 to address this nonattainment problem.

(1) *Identification of air quality problems.* Congress first instructed the States and EPA to identify all areas of the country that were experiencing violations of the NAAQS. A new section 107(d) required each State to list for EPA by early December 1977 those areas that were experiencing violations (nonattainment areas), those areas that were meeting the standards (attainment areas), and those areas that could not be classified for lack of air quality data (unclassifiable areas). It then required EPA to review the lists, make necessary modifications, and promulgate them all by early February 1978. Section 107(d)(5) allows States to modify a list even after promulgation:

... [a] State may from time to time review, and as appropriate revise and resubmit, the list required under this subsection. The Administrator shall consider and promulgate such revised list in accordance with this subsection.

(2) *Content and timing of plan revisions.* Congress then added section 110(a)(2)(I) which required each SIP to contain a provision that would ban the construction or modification after July 30, 1979, of any major stationary source:

... in any nonattainment area [as defined in section 171(2)] to which such plan applies, if the emissions from such facility will cause or contribute to concentrations of any pollutant for which a national ambient air quality standard is exceeded in such area, unless, as of the time of application for a permit for such construction or modification, such plan meets the requirements of Part D (relating to nonattainment areas).

Congress then specified other new requirements for SIP content in Part D. In essence, Part D relaxed attainment dates but tightened control requirements for both new and existing sources.

In section 172(a)(1), Congress directed the States to adopt plans that provided for attainment of all of the primary standards as expeditiously as practicable, and, except for ozone and carbon monoxide, no later than December 31, 1982. Plans were also to provide for all emission reductions available from applying "reasonably available control technology" (RACT). Each plan also had to establish a permit program under section 173 for the construction and modification of major stationary sources.

Congress directed each State to adopt whatever provisions would be necessary to meet these Part D requirements, and submit them to EPA,

by January 1, 1979. See Pub. L. 95-95, section 129(c) (uncodified). Congress required the States to follow EPA's 1976 interpretive ruling on new source construction and modification in the period before the new plans were to come into effect. See Pub. L. 95-95, section 129(a) (uncodified).

(3) *Consequences of failing to submit a plan.* All of the consequences of failing to submit a SIP described above under section 110 potentially apply to States that fail to submit Part D SIP's. In addition, after July 1, 1979, the mandatory construction ban required by section 110(a)(2)(I) was to apply in any nonattainment area that lacked a revised plan that met the Part D requirements. Further, if a State failed to implement its SIP in a nonattainment area, which includes not complying with a call for a SIP revision under section 110(c)(1)(C), the nonattainment area would be subject to a construction ban required by section 173(4).

c. *Part C and Associated Amendments.* The 1977 amendments also added to the Act as Part C to Title I a third set of SIP requirements aimed at the PSD of air quality in attainment and unclassifiable areas. New section 110(a)(2)(J) generally requires each SIP to satisfy the requirements of Part C. Revised section 110(a)(2)(D) specifically requires each SIP to meet Part C's requirements for a preconstruction review program for major new sources and major modifications. Section 161 of the new Part C requires that:

... each applicable implementation plan contain emission limitations and such other measures as may be necessary, as determined under regulations promulgated under this part, to prevent significant deterioration of air quality in each region (or portion thereof) identified pursuant to section 107(d)(1) (D) or (E) of this title ... [i.e., the attainment and unclassifiable areas].

The remaining Part C provisions limit deterioration by establishing maximum allowable increases in pollution, commonly called "increments," and by requiring preconstruction review of major new stationary sources and major modifications.

(1) *The increment system.* For sulfur dioxide and "particulate matter," section 163(a) requires that each plan "... contain measures assuring that maximum allowable increases over baseline concentrations of, and maximum allowable concentrations of, such pollutant shall not be exceeded" Section 163(b) establishes three sets of "maximum allowable increases" for these two pollutants. The most restrictive increments apply in Class I areas, while larger increments apply in areas

designated as Class II or Class III. No provision in the Act, however, defines "particulate matter" as used in section 163.

Section 162(a) designates as Class I areas all international parks and then all national parks, national wilderness areas, and national memorial parks exceeding certain sizes and existing on the effective date of the 1977 amendments. Section 162(a) prohibits the States from changing this designation. Other areas that may have been designated as Class I under earlier EPA regulations for PSD retain their Class I designations, but may be redesignated under procedures described in section 164. Section 162(b) provides that all other areas "... identified pursuant to section 107(d)(1) (D) or (E) which are not established as Class I ... shall be Class II areas" States may, however, redesignate such areas as Class I or Class III under section 164.

While Part C does not contain an increment system for the NAAQS pollutants other than sulfur dioxide and particulate matter, it directs EPA to create such a system or an equivalent one for those pollutants. Thus, for carbon monoxide, ozone, nitrogen oxides, and "... pollutants for which national ambient air quality standards are promulgated after the date of enactment of this part ...," sections 166 (a) and (d) require EPA to promulgate "... specific measures at least as effective as the increments established in section 163"

(2) *The preconstruction review program.* The key element of the preconstruction review program required by Part C is the requirement that a company obtain a PSD permit before constructing virtually¹ any new major stationary source or making any major modification in an attainment or unclassifiable area. See section 165(a), 40 CFR 51.166(i) [formerly 51.24(i)]. A major stationary source is any plant that has the potential to emit 100 tons per year (tpy), or 250 tpy, depending on plant type, of any pollutant regulated under the Act, including the NAAQS pollutants. A major modification is, in general, any change to a major stationary source that would result in a significant net increase in emissions of a regulated pollutant [section 169, 40 CFR 51.166(b)].

¹ Under EPA's current regulations, a project that emits some regulated pollutant can escape PSD review only if it locates in an area that is designated nonattainment for all pollutants to which section 107(d) applies or if it emits only those pollutants for which the area is designated nonattainment. See 45 FR 52676, 52710-52712 (August 7, 1980).

To obtain a permit, an applicant must show that the source or modification would be subject to "best available control technology" (BACT) for each regulated pollutant it would emit in significant amounts [section 165(a)(3), 40 CFR 51.166(j) (1983)]. In addition, an applicant must show that:

... emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard ... [section 165(a)(3)].

Finally, an applicant must provide, for each regulated pollutant emitted by the project, analysis of (1) existing air quality in the project area; (2) the effect the project would have on soils, vegetation, and visibility; and (3) the effect growth associated with the project would have on air quality. For NAAQS pollutants, the analysis of existing air quality generally must include a year's worth of monitoring data [section 165(a)(2), (a)(b), and (e); 40 CFR 51.166(k)-(o)].²

2. New Source Performance Standards

The 1970 amendments also require EPA to establish NSPS for major new air pollution sources. Under section 111, EPA must promulgate such a standard for any category of sources that:

... in [the Administrator's] judgment ... causes or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare ... [section 111(b)(1)(A)].

The standards apply to "new sources," which include both new and modified stationary sources [sections 111(e), 111(a)(2)]. The standards must:

... reflect the degree of emission limitation and the percentage reduction achievable

² Part C gives special protection to Federal Class I areas. It places an "affirmative responsibility" on each Federal land manager (FLM) to protect the air quality related values (AQRV's) of its Federal Class I areas. It then forbids the issuance of a PSD permit in any case where the FLM of a Class I area shows to the satisfaction of the permitting authority that the project in question would affect the AQRV's of the area adversely, even if the applicant shows that the project would not cause or contribute to a violation of an increment over the area [section 165(d)(2) (B), (C)].

On the other hand, Part C provides certain variances from the Class I increments. For instance, even if a project would cause or contribute to an increment violation over a Federal Class I area, the permitting authority may issue a permit if the FLM certifies that the project would not violate certain special increments. For particulate matter, these special increments are equal to the normal Class II increments [section 165(d)(2)(C)].

through application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated . . . [section 111(a)(1)].

B. Regulatory Background

1. Implementation of Particulate Matter Standards

a. *Section 110 State Implementation Plans.* Since 1971 EPA has promulgated, in 40 CFR Part 51, regulations covering a wide range of the planning requirements set forth by section 110. On November 7, 1986 EPA promulgated (51 FR 40656) restructured Part 51 regulations. References to Part 51 in this notice are to the recodified sections.

b. *Part D State Implementation Plans.* (1) *Section 107(d) designations.* The EPA promulgated attainment status designations for particulate matter and four other NAAQS on March 3, 1978, in 40 CFR Part 81 Subpart C (43 FR 8962).

In the preamble of this action, EPA pointed out that it had designated some rural areas "attainment" or "unclassifiable" for particulate matter despite data showing that these areas were experiencing violations of the particulate matter NAAQS (43 FR 8963). Under its Fugitive Dust Policy, EPA defined as "rural" any area with low population that lacked major industrial development or major industrial particulate matter emissions. In the absence of evidence to the contrary, EPA at that time presumed rural dust to be less harmful than urban dust because it consisted primarily of natural materials not contaminated by industrial products.

The EPA also promulgated a rule explaining that it could redesignate areas when air quality data showed that a change was warranted. See 40 CFR 81.300.³

(2) *Guidance for Part D State Implementation Plan revision: "RACT plus studies" policy.* The EPA published most of its guidance for SIP's for nonattainment areas in the form of a "general preamble" interpreting the Part D planning requirements (44 FR 20372, April 4, 1979). The EPA generally required States to apply RACT to all stationary sources unless the State could show that controls on a particular source or group of sources would not

bring about attainment any faster. Moreover, the States had to submit all needed control measures in fully enforceable form (44 FR 20375). For particulate matter, however, EPA allowed States to postpone the adoption of control measures for "nontraditional" sources until the States had an opportunity to study what control measures would be efficacious (44 FR 20378). "Nontraditional" sources included area or background sources such as vehicle traffic and construction activities. All emissions from industrial processes at stationary sources were subject to the requirement for enforceable RACT measures.

Later, as EPA reviewed specific plan revisions, it expanded this policy to allow States to postpone the submittal of attainment demonstrations for the particulate matter standards until the States had a chance to quantify the effects of controlling nontraditional sources. However, the demonstrations, when submitted, still had to provide for attainment of the primary standards by the end of 1982. Also, EPA required areas that postponed demonstrations to impose RACT measures on all traditional sources, since they would be unable to show that they could attain with less stringent controls.

(3) *New source review rules.* The EPA originally issued guidance on the NSR requirements of section 173 in the general preamble. However, in 1980 EPA promulgated detailed regulations on the content of approvable State programs (45 FR 31304, May 13, 1980 and 45 FR 52678, August 7, 1980), codified at 40 CFR 51.165(a) [formerly 51.18(j)]. Part D and these regulations provide, among other things, that State plans must require major stationary sources and major modifications to offset their proposed emissions and achieve the "lowest achievable emission rate" (LAER).⁴

(4) *Environmental Protection Agency action on Part D plans: construction bans, conditional approvals, and policy for correcting deficient Part D plans.* By July 1, 1979, no nonattainment areas had fully approved SIP's, and very few had SIP provisions in effect that limited construction as required by sections 110(a)(2)(I) and 173(4). Consequently, on July 2, 1979, EPA published a regulation that inserted the section 110(a)(2)(I) and section 173(4) construction bans into all SIP's that lacked them (44 FR 39471, now codified at 40 CFR 52.24). In the same

notice, EPA announced that the section 110(a)(2)(I) ban had become effective in each nonattainment area that lacked an approved or promulgated Part D plan revision. The EPA explained that it would remove these bans when it took final action approving or promulgating a plan that met all relevant Part D requirements. The EPA, however, subsequently concluded that the section 110(a)(2)(I) construction ban would not apply if a State lacked a Part D revision for a secondary NAAQS, since section 110(b) allows States to obtain extensions for submitting secondary plans and the legislative history of Part D shows Congress' chief concern was the protection of human health (47 FR 44729, October 12, 1982).

Many nonattainment areas failed to attain the primary standards by the end of 1982. The EPA has interpreted the Act, however, as not requiring the Agency to impose the full array of available sanctions immediately in all of these areas. Instead, on November 2, 1983, EPA announced that it would find plans for areas that failed to attain to be "inadequate" under section 110(a)(2)(H) and 110(c)(1)(C) (48 FR 50686). The EPA would require States to submit revisions for these areas and, if any area failed to comply, EPA would find that the State was not implementing the portion of its SIP that requires revisions in response to a notice under section 110(a)(2)(H). This finding would trigger a construction ban under section 173(4) and funding restrictions under section 176(b).

The EPA acknowledged in its November 1983 notice that it was considering a revision to the particulate matter standard (48 FR 50697). Consequently, EPA deferred, and is continuing to defer, the issuance of notices of inadequacy for particulate matter plans.

2. Implementation of Prevention of Significant Deterioration Requirements

Prior to the enactment of Part C in 1977, EPA had promulgated Federal PSD regulations as 40 CFR 52.21 in response to court rulings that the 1970 Act required SIP's to include PSD measures. See *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (D.C. Cir. 1972), aff'd per curiam, 4 ERC 1815 (D.C. Cir. 1972), aff'd by an equally divided court, sub. nom. *Fri v. Sierra Club*, 412 U.S. 541 (1973). The EPA inserted the Federal PSD regulations directly into each SIP pursuant to section 110(c) of the Act [39 FR 42510]. In 1978 EPA substantially amended its Federal PSD regulations to conform them to the detailed PSD requirements contained in the 1977 amendments [43 FR 25380 (now codified,

³ One court has ruled that section 107(d) does not authorize EPA to redesignate areas to nonattainment unless a State concurs in the redesignation. See *Bethlehem Steel Corp. v. EPA*, 726 F.2d 1303 (7th Cir. 1983). No other court has yet decided this issue.

⁴ Under regulations recently upheld by the Supreme Court, *Chevron, Inc. v. NRDC*, 104 S. Ct. 2778 (1984), EPA defines "major stationary source" for purposes of the nonattainment area NSR program as essentially an entire plant.

as amended at 40 CFR 52.21). At the same time EPA inserted the amended Federal PSD regulations into each deficient SIP.

Pursuant to the statutory requirements, the amended PSD regulations established a Federal permitting system for preconstruction review of new major projects and authorized the Administrator to approve construction only of those facilities that would employ BACT and would not cause or contribute to ambient air quality in excess of any NAAQS or applicable PSD increment [40 CFR 52.21(j), (k)]. The regulations explicitly refer to the statutory increments for sulfur dioxide and "particulate matter" [40 CFR 52.21(c)].

In 1978 EPA also promulgated a second set of PSD regulations outlining the requirements for an approvable State PSD program (43 FR 26380) (now codified, as amended, at 40 CFR 51.166). These regulations mirrored the Federal PSD program for the most part.

Numerous industry and environment groups challenged the amended PSD regulations, which were subsequently affirmed in part and remanded in part in *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979). The court in *Alabama Power* took the position, which was not essential to any of its ultimate dispositions, that EPA had discretion to define "particulate matter" to exclude particles of a size or composition determined not to present substantial health or welfare concerns, not only for purposes of the NAAQS, but also for purposes of the PSD increments (*Id.* at 370, footnote 134).

In 1980 EPA again amended its PSD regulations, this time to make them conform to the *Alabama Power* decision (45 FR 52676). The EPA amended both the Federal PSD program at 40 CFR 52.21 and the requirements for approvable State programs at 40 CFR 51.24 (now 51.166). The EPA again inserted the amended Federal regulations into the SIP for each State that had not previously submitted an approvable PSD program.

3. Implementation of New Source Performance Standards

The EPA has promulgated NSPS in 40 CFR Part 60 that limit particulate matter emissions from 22 categories of stationary sources. The EPA determined that the sources in these categories emit significant amounts of particulate matter. For NSPS, EPA defined "particulate matter" in section 60.2 of Part 60 as "... any finely divided solid or liquid material, other than uncombined water, as measured by reference methods specified under each

applicable subpart, or an equivalent method"

4. Regulatory Precedents: The Environmental Protection Agency Actions on National Ambient Air Quality Standards Since 1977

The EPA has promulgated two major rules concerning NAAQS since Congress revised the Act in 1977. In 1978 EPA, for the first time, promulgated NAAQS for lead (43 FR 46246, October 5, 1978). In a related action addressing implementation issues, EPA directed States to submit plans controlling new and existing sources under section 110, as opposed to Part D (43 FR 46264, October 5, 1978). Thus, there are no formal designations of attainment status under section 107(d) for the lead NAAQS.

Any new major lead source or modification must undergo the PSD review that section 165 requires of all regulated pollutants, unless the source or modification locates in an area that is not designated attainment or unclassifiable for any NAAQS pollutant. [Since EPA has not promulgated any section 107 designations for lead, no source can escape PSD review because it locates in an area designated as nonattainment for lead (see footnote 1).] Such a source or modification must also undergo the review outlined in sections 51.160(a)-(e), 51.161, 51.162, and 51.163 [formerly 51.18(a)-(i)] to ensure that the project will meet applicable SIP limits and not cause or contribute to a NAAQS violation.

In 1979 EPA renamed the NAAQS for "photochemical oxidants" so they applied to "ozone" and raised the numerical level of the primary and secondary standards (44 FR 8202, February 8, 1979). In this case EPA instructed the States to follow Part D. The EPA concluded that, since the revised standard represented a relaxation, States would have no difficulty meeting the Part D deadlines for submitting plans and attaining standards [43 FR 26962, June 22, 1978 (proposed rule); 44 FR 8202].

III. Interpretation of the Clean Air Act Requirements

As indicated above, the Act contains different pathways along which the revised NAAQS could be implemented. These pathways fall under two general categories which, for ease of discussion, are referred to as (1) the section 110 core, and (2) Part D. For the reasons described below, EPA has concluded that only section 110 governs the implementation of the revised primary and secondary PM₁₀ standards. In the following sections of this notice, EPA

discusses its legal interpretation of the Act and applies that legal interpretation to the revised particulate matter standards.

A. Legal Interpretation

1. Conflict in the Literal Language of the Clean Air Act

A literal reading of sections 110(a)(1) and (a)(2)(A) yields a general rule for implementing revised standards and a partial exception. Section 110(a)(1) requires each State to submit "... within nine months after the promulgation of a national ... ambient air quality standard (or any revision thereof) ..." a SIP that implements the new standard in all regions of the State⁵ (emphasis added). Section 110(a)(2)(A), which applies to all plans submitted under section 110(a)(1), stipulates that a plan, to be approvable by the Administrator, must provide for attainment and maintenance within certain specified periods except as may be provided in section 110(a)(2)(I). Section 110(a)(2)(A)(i), for example, requires each SIP implementing a primary standard to provide for attainment as expeditiously as practicable but "... in no case later than three years from the date of approval of such plan (or any revision thereof to take account of a revised primary standard) ..." Section 110(a)(2)(I) on the other hand requires the SIP to contain a construction ban that applies after June 30, 1979, "... in any nonattainment area [as defined in section 171(2)] ... unless ... such plan meets the requirements of Part D" Section 171(2) defines "nonattainment area" as any area that "... is shown ... to exceed any national ambient air quality standard ..." (emphasis added).

Since the term "any revision" in section 110 (a)(1) appears to encompass any revised standard, sections 110(a)(1) and (2) appear to set a general rule that (1) States must submit SIP revisions for all areas to account for NAAQS revisions, generally within 9 months after promulgation of the revised NAAQS and (2) the SIP revisions must provide for attainment within the periods specified in section 110(a)(2)(A)—for example, 3 years from plan approval for a primary standard.

However, since the reference to "any national ambient air quality standard" in section 171(2) also appears to encompass any revised standard,

⁵ Section 110(b) allows EPA to extend this submittal deadline an additional 18 months for revised secondary NAAQS under certain conditions.

section 171(2) together with section 110(a)(2)(I) seem to state an exception to section 110(a)(2)(A) for areas that are "nonattainment" for any standard, new or revised. The exception is that SIP revisions for all such "nonattainment areas" must include a construction ban that can be avoided by satisfying all of the provisions of Part D instead of providing for attainment within the usual periods of section 110(a)(2)(A).

Thus, the Act appears to contain two different and conflicting blueprints for SIP preparation with respect to both content and timing, one in section 110 and the other in Part D, for SIP's for areas that are "nonattainment" under a revised primary or secondary standard.

2. Resolution of the Conflict

In the April 1985 proposal, EPA set out various legal interpretations it could use to reconcile the inherent conflict between section 110 and Part D as to the requirements for "nonattainment areas." After subsequent analysis of the legal issues and review of the numerous public comments received, EPA has concluded that the best legal interpretation is that Part D applies only to those NAAQS that existed when Congress created Part D in 1977 and to revisions to those NAAQS that do not impose significant new planning burdens on the States. Only section 110 applies to new NAAQS and to revised NAAQS that do impose significant new planning burdens on the States.

Congress created Part D in 1977 to deal with the persistent failure of many areas to attain the then existing NAAQS by the statutory attainment dates despite sufficient time for preparation and execution of SIP's. Congress imposed strict new requirements on these nonattainment areas to encourage them to promptly complete the retooling necessary to bring them into attainment. The EPA's review of the relevant statutory language and legislative history leads it to conclude that these more rigorous Part D provisions should not apply to revised standards that impose significant new planning burdens on the States.

In particular, the fixed attainment deadline of December 31, 1982, could produce unreasonable results if strictly applied to such a revised NAAQS. Since that date has already passed, an area under a literal application of the statutory language would become subject to Part D sanctions immediately after a finding that the area exceeds the revised NAAQS, despite the fact that the area could not demonstrate attainment of the revised NAAQS without completing the additional new

planning burdens imposed by the revised NAAQS. Thus, the area would be penalized for having failed to submit a SIP demonstrating attainment by December 31, 1982, even though the planning burdens the area must complete to demonstrate attainment were never required until sometime substantially after that date.

The EPA does not believe that it should apply Part D to these areas and then attempt to ease this burden by interpreting the 1982 attainment deadline as inoperative so that the residual Part D requirement for attainment "as expeditiously as practicable" would apply to areas shown to exceed a revised standard. Under this approach, the meaning of section 110(a)(2)(A)'s 3-year deadline as it relates to revised standards would be lost. It would also mean that an area exceeding a revised standard that imposes significant new planning burdens would not be subject to section 110(a)(2)(A)'s 3-year attainment deadline, while areas exceeding an entirely new standard would be. This would treat these two areas differently, and would treat revised standards more flexibly, even though they would face essentially the same type of planning requirements, which would in all probability be more challenging for new than for revised standards. It is unlikely that Congress would have intended these inconsistent results.

The EPA also rejects the legal interpretation that the relevant Part D provisions do not govern revised standards at all. Arguably, section 171(2) defines "nonattainment areas" as areas exceeding "any national ambient air quality standard," without reference to revised standards. In contrast, section 110(a)(1) expressly applies its 9-month SIP submittal deadline, and section 110(a)(2)(A) its 3-year attainment deadline for primary standards, to "revisions." Congress could have included a similar reference to revised standards in section 171(2) if it had intended Part D to apply to revised standards. This indicates that Congress may have intended the general section 110 scheme to govern the implementation of all revised standards. This reading, however, would produce the result that a relaxation of a pre-1977 NAAQS would automatically shield areas exceeding the revised standard from the strict Part D requirements, even though the revision made it easier for them to attain. It is clear that Congress would not have intended this result. Hence, EPA reads the section 110(a)(2)(A) exception, and thus Part D, as applying to the nonattainment

planning problems that Congress faced when it enacted Part D in 1977 and to those revised NAAQS that result in no significant increase in those problems.

The legislative history of section 110 and Part D also supports the view that revised standards requiring significant new planning burdens should not be implemented under Part D. Congress in 1970 created a SIP development scheme that until 1977 clearly applied to all revised NAAQS. When Congress added Part D in 1977, it did not repeal the requirements either for SIP submittal in section 110(a)(1) or for attainment and maintenance in section 110(a)(2)(A). Moreover, the conflicts between section 110 and Part D (e.g., their different attainment deadlines) show that a single revised standard could not have been intended to be subject to both schemes at one time. Congress, therefore, must have intended section 110 to remain effective for areas that are not attaining at least some revised NAAQS.

Many areas failed to plan adequately to attain the standards EPA promulgated in the early 1970's. The legislative materials behind Part D strongly indicate that Congress' main purpose in enacting Part D was to address the nonattainment problems that persisted because of those planning failures. Congress chose to solve the problems by giving States one last planning opportunity before imposing the sanctions authorized in Part D. In contrast, the history reveals no evidence that Congress intended these tougher measures to apply also where EPA revises a NAAQS so as to impose planning burdens significantly beyond what the Act imposed under the pre-1977 standards. Stated simply, areas that exceed such a revised standard are unlike those for which Part D was plainly intended—namely, areas that had already failed to plan adequately in the first SIP round. Moreover, inferring congressional intent that these measures apply to such revisions would conflict with the pattern of legislation in this area. Congress reserved substantial power to the States when it enacted the 1970 Act. The tough Part D measures, by providing for a significant Federal intrusion on what had previously been the States' domain, represented an exception to the Act's general scheme of cooperative State and Federal regulation. Interpreting ambiguity in the Act's language so as to authorize the most intrusive implementation of Part D would be inconsistent with the basic thrust of the Act.

B. Comparison of Revised and Prior Particulate Matter National Ambient Air Quality Standards

The EPA assessed the impact of the revised primary and secondary NAAQS on the planning requirements of State air pollution control agencies.⁹ It estimated the probability of violating the PM₁₀ NAAQS at each TSP State and local air monitoring station based on 1983-1985 TSP data. These estimates indicate that sites in over 100 counties could violate the PM₁₀ NAAQS. The EPA's SIP development policy which is discussed in section IV.C. of this preamble requires new PM₁₀ SIP's to be developed for each of those areas. To develop SIP revisions for each of the counties, EPA estimates that an average of 4 work years and \$250,000 in State resources could be required. In addition, all States must revise their SIP's to respond to the new monitoring and new source review requirements. Therefore, EPA concludes that the PM₁₀ NAAQS will impose a significant new planning burden upon the States.

The change in the indicator for the revised NAAQS from TSP to PM₁₀ could also create regulatory burdens. This change could result in the need for control strategies to refocus on sources emitting small particles. States may also need to develop PM₁₀ emission inventories and perform modeling based upon PM₁₀. Thus, the change in indicators alone will cause significant impacts which are a factor to consider in interpreting the Act.

C. The Clean Air Act's Applicability to the Revised National Ambient Air Quality Standards

As stated earlier, EPA has concluded that section 110 governs the implementation of all revised standards that would impose significant new planning requirements beyond what the pre-1977 standards required. For the reasons just described, EPA believes that the revised PM₁₀ standards will impose new planning requirements in a significant number of areas. Hence, only section 110 will govern nonattainment problems arising from the revised primary and secondary standards. The policies and rules that EPA discusses in the remainder of this notice implement the EPA's basic conclusion that section 110, and not Part D, applies to implementation of both the primary and secondary PM₁₀ standards.

IV. Requirements for State Implementation Plans

Sections A, B, and C of this portion of the preamble set forth EPA's policy for actions that States must take to prepare

and submit appropriate SIP revisions for existing sources. Section D focuses on the SIP preconstruction review of new sources, including the PSD permit program.

A. Transition Policy

The particulate matter control strategies in existing TSP SIP's reduce ambient concentrations of PM₁₀ as well as TSP. Therefore, to avoid unnecessary disruption of the existing particulate matter control program, States will want to utilize existing SIP requirements as much as possible in their PM₁₀ SIP's. The regulatory requirements of a State's existing TSP SIP must remain in effect, therefore, until a PM₁₀ SIP is approved by EPA [see section 110(i), 42 U.S.C. 7410(i)]. The existing regulations will continue to be enforced by Federal and State agencies and through citizen suits during the period of transition from a TSP SIP to a PM₁₀ SIP.

It is unlikely that the level of control required by the current SIP is significantly more than will be necessary to attain and maintain the PM₁₀ NAAQS. Therefore, regulations in the existing SIP cannot be relaxed without a demonstration that the revision will not interfere with attainment or maintenance of the PM₁₀ NAAQS.

B. Technical Support for State Implementation Plans Development

1. Ambient Data Base

In 1979 EPA began operating ambient samplers in the inhalable particulate (IP) network. That network consisted of ambient air monitoring stations containing high volume samplers, collocated with dichotomous samplers having inlets designed to measure particles nominally 15 micrometers and less (PM₁₅). The stations in the network were located in urban and suburban areas throughout the U.S. to reflect maximum concentrations and population exposure due to urban and industrial sources, and also in nonurban areas to provide information on background levels.

The EPA began operating ambient samplers with inlets designed to collect PM₁₀ early in 1982. Since August 1984, EPA has distributed PM₁₀ samplers to State and local air pollution control agencies. As of December 31, 1986, about 900 samplers were operating at 550 sites. However, sufficient ambient PM₁₀ data are not yet available to allow States to comprehensively evaluate the PM₁₀ attainment status for all areas.

Analysis of the available ambient data reveals that the PM₁₀ portion of TSP varies widely, making it

inappropriate to establish a single nationwide conversion factor to simply convert ambient TSP values to ambient PM₁₀ values. Therefore, EPA has developed a statistical approach for estimating from ambient TSP data the probability that PM₁₀ NAAQS are being violated in the area represented by the ambient sampler. This probability has been termed the "nonattainment probability."

Procedures for using statistical probabilities in the absence of ambient PM₁₀ data are explained in a document titled, PM₁₀ SIP Development Guideline (EPA 450/2-86-001).⁶ A companion document, Procedures for Estimating Probability of Nonattainment of a PM₁₀ NAAQS Using Total Suspended Particulate or PM₁₀ data (EPA 450/4-86-017 referred to herein as the "probability guideline"), explains in detail the methods for estimating PM₁₀ levels using ambient PM₁₅ data, or for estimating the probability of PM₁₀ nonattainment using TSP data.⁴ The probability guideline also contains guidance on determining the spatial extent of PM₁₀ nonattainment problems (i.e., the "PM₁₀ exceedance area" represented by an ambient PM₁₀ sampler). The extent of the PM₁₀ exceedance area must be determined in order to develop a control and compliance strategy that encompasses the area.

2. Technical Guidance

The PM₁₀ SIP Development Guideline provides technical information on how to meet the implementation requirements in this rulemaking. Topics discussed include monitoring PM₁₀ air quality, determining from ambient data when nonattainment problems are apparent, using PM₁₀ emission factors, performing joint dispersion and receptor modeling, interpreting model results, writing emission regulations, and measuring PM₁₀ emissions. It is meant to cover all aspects of SIP development where additional guidance is needed due to the new focus on a PM₁₀ size range. References to other sources of information are included where more detail may be required. The guideline is available from EPA's Regional Offices. The EPA's Office of Air Quality Planning and Standards will be working through its Regional Offices to provide further guidance to States on developing SIP revisions to account for the revised NAAQS.

C. State Implementation Plans Development Policy

For the reasons described earlier, EPA is requiring implementation of the PM₁₀ standards under section 110 of the Act.

Section 110(a)(1) provides that each State shall adopt and submit, within 9 months after revision of a NAAQS, a SIP providing for attainment and maintenance of the primary NAAQS everywhere in the State as expeditiously as practicable but no later than 3 years from the date EPA approves the SIP. Section 110(a)(2) requires that a SIP contain emission limits, schedules, and timetables and such other measures as may be necessary to assure expeditious attainment and maintenance. The EPA's regulations in 40 CFR 51.112 (formerly section 51.13) adopted under section 110(a)(2) of the Act, require that States demonstrate through modeling or an adequate alternative that this control strategy will indeed assure timely attainment and maintenance.

The EPA has considered different ways of implementing this control strategy demonstration requirement under the 9-month SIP submittal schedule in section 110(a)(1). There is a great deal of merit in obtaining ambient PM_{10} data in all areas to specifically define the extent and degree of PM_{10} nonattainment situations before developing control strategies. However, due to applicable Act requirements and the environmental risk in areas with severe air quality problems, the Administrator cannot permit delay in the development of PM_{10} control programs simply because ambient PM_{10} data are unavailable.

Another approach would be simply to call upon States to develop and submit a full PM_{10} attainment demonstration and control strategy for every area of the country within the 9-month period. The EPA believes, however, that such a requirement would be unreasonable for certain areas. An analysis of the latest ambient TSP data in conjunction with the methodology in the probability guideline indicates that there could be from around 50 to 150 counties in which the PM_{10} NAAQS will not be attained.⁶ While these numbers are the best indication at this time of the potential nonattainment situation for PM_{10} , they are only estimates and, furthermore, will probably change as new ambient TSP and PM_{10} data become available. The estimates are, however, useful as an indication of the degree of PM_{10} SIP development that may eventually be necessary. The key point is that many of the 3141 counties in the nation may need no additional particulate matter SIP provisions to meet the revised NAAQS. Thus, for many areas, the existing TSP SIP's may already provide for timely attainment and maintenance of the PM_{10} NAAQS. To call upon areas that almost certainly have adequate SIP's to

resubmit those SIP's along with full attainment demonstrations would be unnecessary and therefore wasteful of limited State resources.⁶

There are, also, several areas where available data indicate that air quality may be close to the level of the NAAQS. Many of these areas may actually be shown, with more ambient data, to be in attainment or may need only minor SIP changes. Therefore, EPA believes that a demand for immediate submissions of attainment demonstrations and control strategies for all of these areas is unreasonable when additional air quality data could provide a more clear picture of the status of the area.

For the reasons given immediately above, EPA is adopting the SIP development policy it proposed April 2, 1985. The EPA is dividing all areas of the country into three categories: (1) Areas with a strong likelihood of violating the PM_{10} NAAQS and requiring substantial SIP adjustment (Group I), (2) areas where attainment of the standards is possible and existing SIP's probably need less adjustment (Group II), and (3) areas with a strong likelihood of attaining the PM_{10} NAAQS and therefore needing only adjustments to the PSD/NSR provisions in their SIP (Group III). For purposes of this program, "areas" are conceptually the same as "areas" for which classifications are designated in Part 81, although there will be no area designations in Part 81 for PM_{10} . The spatial extent of a PM_{10} attainment or nonattainment situation may differ from TSP area boundaries. Guidance is provided in the probability guideline for determining the area of exceedance of the PM_{10} NAAQS.

1. Area Grouping Procedures

For those areas where there are sufficient ambient PM_{10} data to define PM_{10} NAAQS attainment or nonattainment in accordance with Appendix K of 40 CFR Part 50, the need for SIP revision can be determined relatively easily. The SIP's are due within 9 months for such areas that cannot demonstrate attainment. For other areas with insufficient PM_{10} data, EPA will use a three-step process to categorize areas.

First, where only ambient TSP data are available, or limited amounts of

PM_{10} are available, EPA in cooperation with State agencies will use those data and the probability guideline to classify areas preliminarily as Group I, II, or III.⁷ The EPA will presume that (1) areas with a probability of not attaining the PM_{10} standard of at least 95 percent fit into Group I, (2) areas with a probability of between 20 and 95 percent fit into Group II, and (3) areas with a probability of less than 20 percent fit into Group III.

Second, EPA's Regional Offices, after consulting with the appropriate State and local agencies, will evaluate the existing TSP SIP's and other relevant information for each area in their jurisdiction (1) to see whether information other than the probability of nonattainment justifies changing the group for an area, and (2) to determine the appropriate group for areas that the EPA could not classify under the first step because ambient TSP data were unavailable.

⁷ The EPA has computerized the procedures described in the probability guideline and has made the computer software available to States to calculate nonattainment probabilities. The EPA has also made the results of its own calculations available to the States.

The EPA has found that some uncertainty exists in the PM_{10} measurements collected prior to 1987 with the PM_{10} instruments available at that time. Specifically, a study performed by EPA in Phoenix has shown that in extreme situations, data collected by the Sierra Anderson SA-321A size selective PM_{10} instrument can be influenced by coarse particles to the extent that concentrations may be biased high by as much as 20 percent.⁸ In addition, data collected by the Wedding and Associates GMW-9000 instrument may be biased low 20 percent due to soiling problems and improper cleaning. In order to account for the uncertainty associated with such reported PM_{10} concentrations, a zone of uncertainty or "gray zone" of ± 20 percent will be placed around the standard for the purpose of calculating the probability of nonattainment. Further, the gray zone will be divided into two portions: the lower gray zone, defined as 0.8 NAAQS to NAAQS, and the upper gray zone, specified as NAAQS to 1.2 NAAQS. In particular, when calculating probabilities based on PM_{10} from SA-321A instruments, PM_{10} observations within the upper gray zone will not be counted as exceedances of the 24-hour standard and PM_{10} annual means (calculated using all PM_{10} data) that fall in the upper gray zone will not be counted as exceedances of the annual standard. Similarly, when calculating probabilities based on PM_{10} data from GMW-9000 instruments, 24-hour PM_{10} values and annual PM_{10} means (using all data) that are within the lower gray zone will be counted as exceedances of the respective standards.

If an area's nonattainment probability using TSP data and PM_{10} data drops below 0.20 or rises above 0.95, as a result of PM_{10} data in the "gray zone," it will be classified Group II in order to resolve the possible uncertainty associated with the PM_{10} data and to ensure that a determination is made as to whether the existing SIP provides for attainment and maintenance of the PM_{10} standards. Areas will not be classified Group I solely on the basis of SA-321A data that are within the upper gray zone. Similarly, areas will not be classified Group III on the basis of data, Produced by GMW-9000 instruments, that are within the lower gray zone.

⁸ Developing a sound attainment demonstration is generally resource intensive. It requires an in-depth study of the emission characteristics of specific sources in the demonstration area and a thorough evaluation of the anticipated effects of various emission levels from those sources. The EPA estimates it could require up to 4 work years and \$250,000 to develop a SIP for each area found to be violating the NAAQS.

Third, to insure national consistency, all grouping will be reviewed by representatives of EPA's Headquarters staff and Regional Offices.

Requirements for Group I Areas.

States will be required to submit complete SIP's for all areas in Group I within 9 months of promulgation of the PM₁₀ NAAQS. These SIP's will have to contain full PM₁₀ control strategies including a demonstration of attainment as expeditiously as practicable, but not later than 3 years (for the primary standards) from approval of the SIP, and provisions for maintenance, as well as meeting the PSD/NSR requirements discussed in section D below.

As provided in section 110(e) of the Act, the Governor may apply, at the time the SIP is submitted, for up to 2 additional years for attainment of the primary standards. The Administrator may grant an extension if he determines that:

... (A) one or more emission sources (or classes of moving sources) are unable to comply with the requirements of such plan which implement such primary standard because the necessary technology or other alternatives are not available or will not be available soon enough to permit compliance within such 3-year period, and

(B) the State has considered and applied as a part of its plan reasonably available alternative means of attaining such primary standard and has justifiably concluded that attainment of such primary standard within the 3 years cannot be achieved.

The Administrator must also determine that the plan provides for:

... (A) application of the requirements of the plan which implement such primary standard to all emission sources in such region other than the sources (or classes) described in paragraph (A) [above] within the 3-year period, and

(B) such interim measures of control of the sources (or classes) described in paragraph (A) [above] as the Administrator determines to be reasonable under the circumstances.

Requirements for Group II Areas.

States will also be required to submit SIP's for all areas in Group II within 9 months of NAAQS promulgation, but those SIP's need not contain full control strategies and demonstrations of attainment and maintenance. Instead, States may submit "committal" SIP's that supplement the existing SIP's with enforceable commitments to:

(a) Gather ambient PM₁₀ data, at least to an extent consistent with minimum EPA requirements and guidance.⁸

⁸ Section 58.13 of 40 CFR Part 58 requires States, within 1 year after PM₁₀ NAAQS are promulgated, to begin sampling PM₁₀ everyday (at at least one site) in areas with a PM₁₀ nonattainment probability of 95 percent or greater, and every other day (at at least one site) in areas with a nonattainment probability between 20 and 95 percent.

(b) Analyze and verify the ambient PM₁₀ data and report 24-hour PM₁₀ NAAQS exceedances to the appropriate Regional Office within 45 days of each exceedance.

(c) When an appropriate number of verifiable 24-hour NAAQS exceedances becomes available (see Section 2.0 of the PM₁₀ SIP Development Guideline) or when an annual arithmetic mean (AAM) above the level of the annual PM₁₀ NAAQS becomes available, acknowledge that a nonattainment problem exists and immediately notify the appropriate Regional Office.

(d) Within 30 days of the notification referred to in (c) above, or within 37 months of promulgation, whichever comes first, determine whether the measures in the existing SIP will assure timely attainment and maintenance of the primary PM₁₀ standards, and immediately notify the appropriate Regional Office.

(e) Within 6 months of the notification referred to in (d) above, adopt and submit to EPA a PM₁₀ control strategy that assures attainment as expeditiously as practicable but no later than 3 years from approval of the committal SIP.

The EPA proposed (50 FR 13130) that States determine whether measures in the existing SIP were adequate [item (d) above] and notify the appropriate Regional Office within 18 months after approval of the committal SIP. Assuming the committal SIP was submitted to EPA 9 months after promulgation and EPA approved the SIP in 6 months, the notification of SIP adequacy would have been due within 33 months of promulgation. The EPA is changing the latest date of notification of SIP adequacy to 37 months after promulgation for two reasons. First, 18 months was allowed initially for making PM₁₀ air quality measurements. However, 3 years of valid air quality data are required to determine the attainment status of an area in accordance with Appendix K of 40 CFR Part 50. Second, if the committal SIP is submitted late or approval is not completed in 6 months, the date of notification would extend beyond 33 months after promulgation. The EPA believes it is best to have a firm date by which the adequacy of the existing SIP must be determined for Group II areas and still allow adequate time to collect PM₁₀ data. The PM₁₀ monitors have been operating for several months already in many Group II areas. The time a State has to implement a control strategy and comply with the PM₁₀ NAAQS could be shortened by 4 months if the committal SIP is submitted in 9 months, approved in 6 months, and the notification of SIP adequacy is not made until the end of

the 37-month period. However, any area that requires a full 3 years of monitoring to determine that it is violating the NAAQS, must be very close to the NAAQS. Therefore, only very minor adjustments to the control strategy should be required to attain the NAAQS.

The following factors should be considered in determining the adequacy of the existing SIP in item (d) above:

(1) *Air quality data.* (Time is allotted for up to 3 years of PM₁₀ data to be collected if a NAAQS is not violated sooner. At the end of that time, the available PM₁₀ data must be examined to determine if attainment can be demonstrated in accordance with Appendix K of 40 CFR Part 50 or the "Guideline on Exceptions to Data Requirements for Determining Attainment of Particulate Matter Standards" in the absence of adequate PM₁₀ data.)⁹

(2) *The present control strategy.* (The existing control strategy must be evaluated to determine if it is fully implemented; if it is adequately enforced; if start-up, shutdown, and malfunction regulations are adequate to prevent circumvention of the emission limitations; and it can adequately attain and maintain the PM₁₀ NAAQS if the above conditions are met. The evaluation should include the use of dispersion and receptor modeling techniques where appropriate.)

(3) *Emissions data.* (The emission inventories must be evaluated to determine if emissions can increase significantly because actual emissions are far below allowable emissions for the area, if sources with operating permits are not operating or are operating at reduced capacity, and if "banked" emissions could impact future air quality.)

The committal SIP must include an enforceable schedule with appropriate milestones or checkpoints. The EPA will review and act on both the committal SIP's and on control strategies submitted under step (e). For Group II areas, States may, if they wish, submit full PM₁₀ attainment demonstrations within 9 months as required for Group I areas in lieu of the committal SIP.

The SIP revisions necessary to meet the PSD/NSR requirements detailed in section D below must be submitted in 9 months, also.

Requirements for Group III Areas. For Group III areas, EPA will presume that the existing SIP is adequate to demonstrate attainment and maintenance of the PM₁₀ standards. States, therefore, need only make SIP revisions as required under the

preconstruction review program (see section D) within 9 months. The EPA will make a final determination of the adequacy of individual Group III SIP's at the time it takes action on these revisions. Any of these areas which subsequently observe violation of the PM₁₀ NAAQS will be treated as newly discovered nonattainment areas.

2. Area Designation Policy

The EPA proposed to amend Part 81, "Designation of Areas for Air Quality Planning Purposes," by transferring the area designation of nonattainment for the primary TSP standard to an area designation of nonattainment for the secondary TSP standard. Since the Administrator has determined that the indicator for the secondary standard should also be changed from TSP to PM₁₀, EPA is withdrawing this proposed change to Part 81.

The EPA will continue to accept requests by the State to revise area designations for TSP from nonattainment to attainment or unclassifiable. The requests will continue to be reviewed during the transition period for compliance with EPA's redesignation policies as issued in memorandums from the Director of the Office of Air Quality Planning and Standards (OAQPS) April 21, 1983, and September 30, 1985.^{8,9}

States are encouraged to request redesignation of TSP nonattainment areas to unclassifiable at the time the PM₁₀ control strategy for the area is submitted. When EPA approves the control strategy as sufficient to attain and maintain the PM₁₀ NAAQS, it will also approve the redesignation. An area designation must be retained until EPA promulgates PM₁₀ increments because the section 163 PSD increments depend upon the existence of section 107 designations. Once States have PM₁₀ SIP's in place and EPA has promulgated PM₁₀ increments, EPA will act on requests to delete TSP designations. See section D below for a full discussion of this issue in connection with the requirements for PSD programs.

3. Fugitive Dust Policy

The EPA proposed to continue a 1977 fugitive dust policy which directs the efforts to control particulate matter be expended first at sources in urban areas and next at certain large manmade sources in rural areas.^{10,11} In response to a broad range of comments on this issue, EPA has developed three alternatives to the existing policy. Elsewhere in the *Federal Register* today EPA is publishing a notice proposing those alternatives. Until EPA has reviewed comments on

the proposal and takes final action, the existing policy will remain in effect.

4. Emission Trading (Bubble) Policy

In EPA's initial bubble policy (44 FR 71780, December 11, 1979), alternative emission reduction options (bubbles) approved as part of a SIP for TSP are treated as any other existing SIP provision that may or may not be revised in order to control emissions from other sources to attain the PM₁₀ NAAQS. The recently published final Emissions Trading Policy Statement Technical Issues Document confirms this position by stating that if ambient violations of any standard are discovered in an area where EPA has approved a trade, sources in the trade could potentially be subject to requirements for additional emission reductions just as all other sources in the area [see 51 FR 43814 (December 4, 1986)]. Although there is no specific requirement to review existing bubbles, bubble agreements cannot interfere with State efforts to attain and maintain the PM₁₀ NAAQS.

5. Sanctions Policy

Section 110 provides for Federal intervention if a State fails to submit an adequate SIP. Under section 110(c)(1), EPA must promulgate plan provisions for a State if the State fails to submit a plan at all, submits a plan that does not meet the section 110 requirements, or fails to comply with a notification under section 110 (c)(1)(C), i.e., a call for a plan revision under the provisions of section 110(a)(2)(H). The EPA must promulgate a substitute plan unless the State in the interim adopts and submits a plan that EPA finds adequate.

The EPA intends to explore the legal issues, appropriateness, and authority for imposing a construction ban under sections 110(c) and 301 of the Act as the first element of a Federal plan. A construction ban would serve to limit any growth of PM₁₀ emissions in a nonattainment area while EPA is developing a control strategy for the area. The EPA will also explore the appropriateness and authority of using funding sanctions to stimulate development and implementation of plans.

D. Prevention of Significant Deterioration/New Source Review Program

Today's notice promulgates certain new and revised provisions which will change the way in which EPA and State and local air pollution control agencies implement preconstruction review requirements for particulate matter. The most significant effects of today's

actions are that: (1) Proposed new and modified sources must evaluate their emissions of particulate matter on the basis of two separate indicators—TSP and PM₁₀, and (2) the preconstruction review of major new and modified sources which emit particulate matter will be conducted primarily under the PSD program. Since EPA is not using section 107 area designations for PM₁₀, Federal requirements which apply to the preconstruction review of sources locating in designated section 107 nonattainment areas will generally not apply with respect to particulate matter in the long run, as explained in more detail below.

1. Revised PSD Program for Particulate Matter

a. *Transition.* Today's amendments to the Part 52 PSD regulations, establishing new requirements for PM₁₀, take effect 30 days from today on the effective date of the revised NAAQS for particulate matter. The EPA is making these amendments effective at the earliest possible date because once the PM₁₀ NAAQS becomes effective, EPA will be responsible for the protection of the PM₁₀ NAAQS as well as the review of PM₁₀ as a regulated pollutant.⁹ Consequently, PSD applicants requesting preconstruction review approval from EPA or a State that implements PSD under a Federal delegation of the Administrator's PSD authority must begin to address the new PM₁₀ requirements unless they are eligible for grandfather status as described below.

States with approved PSD SIP's will have 9 months from the effective date of today's PSD amendments to revise their SIP's for PM₁₀ and submit them to EPA for approval. See revised section 51.166(a)(6) [formerly section 51.24(a)(6)]. In the meantime, the EPA expects these States to continue implementing their existing programs for particulate matter. In some cases, this may involve the automatic assumption of responsibility for the review of PM₁₀. EPA believes that some States may have PSD rules which, like EPA's Part 52 PSD

⁹ Section 52.21(k)(1) contains a general provision requiring prospective PSD sources to demonstrate that their potential emissions will not cause or contribute to air pollution in violation of "any" NAAQS. On the date that EPA's revisions to the NAAQS for particulate matter become effective, EPA will become responsible for protecting the revised NAAQS, instead of the old TSP NAAQS, under the preconstruction review process. Similarly, various PSD provisions, e.g. 52.21(j)(2), apply to "any pollutant subject to regulation under the Act," and would, thereby, automatically include the PM₁₀ indicator for particulate matter on the date this new indicator becomes effective.

regulations, are sufficiently open-ended so as to require the immediate protection of the PM₁₀ NAAQS and review of PM₁₀ as a regulated form of particulate matter.

Over the course of the next several months, EPA will audit State PSD permitting activities to determine whether or not States are implementing their existing PSD requirements for particulate matter. In the event EPA finds that a State is not protecting the NAAQS for particulate matter in either of its regulated forms, EPA will initiate action pursuant to section 110(c)(1) of the Act to disapprove the State's PSD program with respect to particulate matter and will reinstate amended Part 52 PSD regulations into the SIP for such State. The EPA will then protect the PM₁₀ NAAQS in that State through the Part 52 PSD program until the State submits, and EPA approves, a PM₁₀ SIP which includes adequate PSD provisions.

As a result of today's amendments, additional new sources and modifications may be required to undergo PSD review for particulate matter, and sources already required to undergo PSD review for particulate matter may be subject to additional analyses for PM₁₀. In fairness to certain of these applicants, EPA is phasing in the new requirements by means of two grandfather provisions and a monitoring program.

The first grandfather provision prevents the retroactive review of sources that were not previously subject to PSD review for particulate matter, provided that the affected sources: (a) Obtained all the necessary approvals under the SIP before the effective date of the new requirements, and (b) commenced construction within 18 months from the effective date of the new requirements or any earlier time required under the SIP [see new section 52.21(i)(4)(ix)].

The second provision excludes from PSD review for PM₁₀ any applicant that, before the effective date of today's Part 52 PSD amendments for PM₁₀, submits to EPA or its delegated representative a complete PSD application which already addresses particulate matter, even though a final determination has not yet been made on the permit [see new section 52.21(i)(4)(x)]. Any source eligible for this grandfather provision must meet the requirements for particulate matter that were in effect before the effective date of the PM₁₀ amendments.

Today's action also provides some relief to certain applicants who would otherwise be expected to include up to 1 year of ambient monitoring data for

PM₁₀ as part of a complete PSD application. Three transition provisions relating to the preapplication monitoring requirements will take effect. These provisions are described below under *g. PSD Monitoring*.

b. Source Applicability. A major new source or modification will be subject to PSD review for PM₁₀ if it would emit PM₁₀ in significant amounts.¹⁰ Today's action amends the definition of "significant" for particulate matter under section 51.166(b)(23)(i) [formerly 51.24(b)(23)(i)] and section 52.24(b)(23)(i) to include an emission rate for the new PM₁₀ indicator. Upon its effective date, the new significant emission rate, 15 tpy of PM₁₀ emissions, will begin to apply to each PSD applicant subject to EPA's Part 52 PSD regulations.

States with approved PSD SIP's are expected to make similar amendments to their PSD rules to add the new significant emission rate for PM₁₀ within the 9-month period allowed under the Act. In the meantime, States must examine the source applicability provisions in their existing PSD rules to determine whether PM₁₀ is automatically incorporated as a "regulated" pollutant (by virtue of the fact that it will be a pollutant regulated under the Act) or whether specific rulemaking action must be taken to accomplish that result. The EPA believes that some States may have PSD rules which could immediately require the review of PM₁₀ as a regulated pollutant, even though the State rules do not yet contain a specified significance level for PM₁₀ emissions. Prospective PSD applicants should inquire as to the status of existing State PSD rules with respect to PM₁₀.

The existing "particulate matter" significance level of 25 tpy is being clarified to apply to particulate matter emissions [see revised sections 51.166(b)(23)(i) and 52.21(b)(23)(i)].¹¹

¹⁰ PSD applies to new major stationary sources and major modifications of existing major stationary sources. A "major stationary source" for PSD purposes is: (1) any source type belonging to a list of 28 source categories that emits or has the potential to emit 100 tpy or more of any pollutant regulated under the Act, or (2) any other source that emits or has the potential to emit any pollutant regulated under the Act in an amount equal to or greater than 250 tpy. The PSD review requirements apply to any regulated pollutant which the new or modified major stationary source would emit in significant amounts. Thus, a source may be "major" for only one pollutant, but PSD review would apply to other pollutants emitted in "significant" amounts.

¹¹ Elsewhere in today's notice, the Administrator has established new definitions, "particulate matter emissions" and "PM₁₀ emissions," to distinguish between those emissions of the pollutant particulate matter which affect ambient concentrations of TSP and PM₁₀, respectively. [See new section 51.100 (oo) and (qq).]

The EPA considers TSP to remain regulated under the Act because, even though a NAAQS will no longer exist for TSP, the statutory PSD increments for particulate matter will still be expressed in terms of TSP. It follows then that, since PSD applicability is defined in terms of significant emissions of any pollutant subject to regulation under the Act, significance levels for both regulated indicators of particulate matter are necessary.

The fact that there are now two different indicators for particulate matter means that sources of particulate matter could be required to undergo PSD review for either or both forms of the pollutant. Conversely, an emission rate lower than the significant emission rate for one form of particulate matter would allow a source to be excluded from PSD review only with respect to that specific form of the pollutant.

For source modifications, the PSD review requirements will apply to whichever form of particulate matter results in a significant net emission increase. Any determination of whether a proposed modification would exceed the PM₁₀ significance threshold should be based only on PM₁₀ emission changes, which include actual emission changes from a particular modification and other creditable increases and decreases of actual PM₁₀ emissions that are contemporaneously associated with the modification. For PM₁₀, that portion of the contemporaneous particulate matter emission change with a particle size larger than PM₁₀ would not be creditable. If both PM₁₀ and TSP particulate matter emissions increase significantly, then both are subject to PSD review.

c. Geographic Applicability. Under the section 110 implementation pathway applicable to PM₁₀, the new PSD requirements for PM₁₀ will generally apply if the otherwise subject source locates in an area designated attainment or unclassifiable under section 107 for any pollutant. This means that the PSD requirements for PM₁₀ will apply in all locations because there are no areas where a section 107 nonattainment designation currently applies to all pollutants. The Administrator's determination that only section 110 applies to the revised (PM₁₀) NAAQS for particulate matter means that there will be no Federal requirements under a Part D based nonattainment area preconstruction review with respect to PM₁₀.

For TSP, the PSD requirements will continue to apply in any area which does not have a section 107 nonattainment designation for TSP.

Since the indicator for the particulate matter NAAQS has been changed to PM_{10} , arguably it is no longer meaningful to maintain section 107 designations (whether attainment, nonattainment, or unclassifiable) with respect to the TSP NAAQS.¹² However, EPA believes that as stated in the April 2, 1985, proposal, the Class II increments for particulate matter only apply in areas that bear a designation of attainment or unclassifiable specifically for the NAAQS for particulate matter, not just for any NAAQS.¹³ Consequently, in order to preserve the applicability of the increments as desired, EPA will not approve any State requests to completely delete these TSP designations until the new PM_{10} increments have been established (see further discussion below in section f. *PSD Increments for Particulate Matter*).

States may request redesignation of their existing TSP nonattainment areas to unclassifiable areas, pursuant to section 107 and EPA will approve such request on or after the date that EPA approves the State's control strategy as sufficient to attain and maintain the PM_{10} NAAQS. Such redesignations would enable PSD review to be applied with respect to both indicators for particulate matter and will avoid the complexity of conducting the nonattainment NSR for TSP, while simultaneously conducting PSD for PM_{10} .

d. *Best Available Control Technology*. While no actual changes have been made to the control technology review requirement for PSD, today's action by the Administrator to regulate a PM_{10} indicator for particulate matter means that any major stationary source or major modification having the potential to emit PM_{10} in significant amounts, i.e., 15 tpy or more, and seeking a PSD permit under the Part 52 PSD regulations must now consider how it will ensure

the application of BACT for PM_{10} emissions. A similar source undergoing PSD review under EPA-approved State regulations will also be required to address BACT for PM_{10} if the applicable State's PSD rules automatically cover PM_{10} as a regulated pollutant, despite the lack of a specified significance level for PM_{10} emissions in the State rule; otherwise, no BACT requirement will apply to PM_{10} in such State until the SIP is appropriately revised.

Where PSD applicants request permit approval under the Part 52 PSD regulations, the Administrator will seek to establish emission limitations defined in terms of PM_{10} emissions contingent upon the availability of emission factors and control efficiency information for the source under review. The feasibility of establishing a PM_{10} emission limitation will thereby be a case-by-case determination. Compliance in each case is to be based on an acceptable test method also to be determined on a case-by-case basis. Appendix C of EPA's PM_{10} SIP Development Guideline describes procedures for modifying existing sampling techniques to collect PM_{10} emissions data. The EPA is also developing specific PM_{10} emissions measurement methods which will be available in the future.

Where a quantifiable PM_{10} emission limit is not yet feasible, the Administrator intends to allow the use of TSP-based emission limitations, provided that the reduction of PM_{10} emissions—and not just "particulate matter emissions"—has been considered to the extent possible in the BACT determination.

e. *National Ambient Air Quality Standards Analysis*

When the revised NAAQS for particulate matter become effective, each PSD application subject to EPA's Part 52 PSD regulations, and not eligible to be grandfathered under today's action, must contain a PM_{10} NAAQS analysis. Applicants seeking permits from States with SIP-approved programs will also have to demonstrate compliance with the PM_{10} NAAQS if the State's regulations are sufficiently open-ended to accommodate EPA's revised NAAQS for particulate matter without further rulemaking action on the part of that State. Otherwise, PSD applicants will have additional time before a PM_{10} NAAQS analysis will be required by the State's revised preconstruction review procedures.

The required PM_{10} analysis must demonstrate that the proposed major new or modified source will not cause or contribute to ambient concentrations of

PM_{10} exceeding the PM_{10} primary and secondary NAAQS as required by section 165 of the Act. This analysis applies in general to PSD sources which have the potential to emit significant amounts of PM_{10} emissions. In the event that such demonstration indicates that the proposed source would cause or contribute to ambient PM_{10} levels exceeding the revised NAAQS, the Administrator will require the applicant to obtain, at a minimum, sufficient PM_{10} emission offsets to compensate for the source's ambient impact in the area of the violation.¹⁴ In addition, the Administrator intends that emission offsets allowed for PSD purposes must meet applicable creditability criteria equivalent to those set forth under section 51.165(a) [previously section 51.18(j)].¹⁵

¹⁴ In the April 2, 1985 proposal, the Administrator indicated that under the Part 52 PSD regulations he intended to require, at a minimum, that sources found to cause or contribute to a PM_{10} NAAQS violation must obtain sufficient emission offsets so as to provide a "net air quality benefit," thus satisfying the "cause or contribute to" language under section 165(a)(3) of the Act. Later in the proposal, he stated that the "net air quality benefit" test would also apply to offsets required under State PSD programs and section 51.18(k) [now section 51.165(b)] programs as well. The Administrator has since concluded that the "net air quality benefit" test for the required offsets is appropriate in only some areas, namely areas where violations of the PM_{10} standard already exist but do not have an approved plan demonstrating attainment of the PM_{10} standard as expeditiously as practicable. In these areas, new sources would otherwise continue to "contribute" to the existing violations if they merely compensated on a one-for-one basis for their own ambient impact and failed to also provide air quality progress, inasmuch as such areas have yet to satisfactorily provide for attainment through available reductions from existing sources. Only by providing for some air quality improvement could new sources help to remedy the existing nonattainment problems in such areas rather than "contributing" to them. Conversely, in areas that are not experiencing existing violations of the PM_{10} NAAQS, new sources would not need to provide air quality progress because once such sources adequately compensate for their own adverse air quality impacts, the areas would remain in attainment of the PM_{10} NAAQS. Similarly, in areas that may be experiencing violations of the PM_{10} NAAQS but that do have an approved plan demonstrating attainment as expeditiously as practicable, new sources that adequately compensate for their own projected ambient impacts would not need to provide additional emissions reductions since the areas are already moving towards attainment as expeditiously as is practicable. States may, of course, require additional offsets in these latter areas should they desire to do so.

¹⁵ On August 25, 1983, EPA proposed amendments to its regulations concerning the construction of new and modified stationary sources of air pollution (48 FR 38742). Included were two proposed changes to the offset creditability criteria contained in section 51.18(j) [recodified as section 51.165(a)]. Specifically, EPA proposed to revise subparagraph (j)(3)(ii)(T3c) [now (a)(3)(ii)(c)] which pertains to the creditability of emission reductions achieved by shutting down an existing

Continued

¹² Section 107(d) authorized the States to submit, and EPA to subsequently promulgate, a list of areas that on August 7, 1977, did or did not comply with the various NAAQS in existence on that date. Although section 107(d)(5) continues to provide for revisions to these lists, it would make no sense to continue to maintain a list indicating ongoing compliance with a standard that is no longer in effect.

¹³ See 50 FR 13147, discussion under d. *NAAQS Analysis/Increment Consumption*. The same argument would also apply to Class III increments; however, no Class III designations have been made to date under the PSD program. (With respect to all subsequent discussions pertaining to Class II areas and increments, such discussions will also apply to Class III areas and increments.) On the other hand, mandatory Class I areas and the Class I increments would remain in effect since their general applicability is independently established by the Act and is not linked to the section 107 area designation process. See sections 162(a) and 163(b)(1) of the Act.

Where a State must first revise its SIP to redefine the ambient air quality standards for particulate matter in terms of PM_{10} before a PM_{10} review would be required, EPA anticipates that a proposed source seeking a State permit (including a PSD permit where applicable) will have to continue to demonstrate its ability to meet the TSP-based NAAQS as a matter of State law. Moreover, the particular State preconstruction review requirements which must be met will continue to be based on geographic applicability as governed by current section 107 area designations for TSP. It is possible, therefore, that a source could be subject to EPA's Part 52 PSD regulations requiring compliance with the newly-revised PM_{10} primary and secondary NAAQS and the applicable State preconstruction review procedures requiring compliance with the old TSP NAAQS. This particular outcome will not occur, however, after such State revises its SIP for the PM_{10} NAAQS.

f. Prevention of Significant Deterioration Increments for Particulate Matter

The Administrator today is announcing his intention to establish PM_{10} increments pursuant to section 166 of the Act.¹⁶ In accordance with the procedures established by Congress under paragraphs (a) and (b) of section 166, over the next several years, EPA will propose and promulgate regulations which set forth new PSD increments measured by the PM_{10} indicator. These regulations are to become effective 1 year after the date upon which EPA promulgates them, whereupon States will be given time to revise their SIP's to include the new PM_{10} increments and submit them to EPA for approval. Ultimately, EPA plans to allow States to use the new PM_{10} increments to effectively replace the existing increments for "particulate matter," as further described below.

During the period of time required to incorporate the new PM_{10} increments

into State PSD programs, the Administrator is taking steps to ensure that the existing PSD increments for particulate matter in section 163 of the Act will continue to be measured by the TSP indicator. Although the statute does not specify an indicator to be used to measure particulate matter levels against the statutory increments (they are simply referred to as increments for "particulate matter"), it is clear from the legislative history that Congress could only have intended these increments to be measured as TSP.

At the time Congress created the increments, the particulate matter NAAQS were measured as TSP. Congress created the "particulate matter" increments in section 163 by taking a percentage of the lowest NAAQS concentration for each measurement period [see e.g., H.R. Rep. No. 95-294, 95th Cong., 1st Sess. (1977), p. 153ff]. In this way, ambient concentrations of particulate matter could generally be restricted to levels below the NAAQS levels. This approach only makes sense if Congress intended to use the same indicator for the increments as was then in use for the NAAQS. Therefore, under today's revisions EPA is clarifying these increments so as to apply them specifically to ambient TSP concentrations.

The TSP increments will continue to apply in mandatory Class I areas (see footnote 13) and in Class II areas for TSP, i.e., areas which, pursuant to section 107, are designated attainment or unclassifiable for TSP. The EPA anticipates a potential problem if States should request deletion of their section 107 TSP designations when they adopt PM_{10} NAAQS to replace the old TSP NAAQS. As noted earlier in this preamble, the statutory Class II TSP increments will no longer apply in an area once EPA has deleted the existing section 107 designations for TSP pursuant to State request, since Class II areas are defined as a subset of section 107 area designations. If EPA were to grant such requests in the absence of PM_{10} increments, many areas would be subject to no PSD increments for particulate matter in either of its regulated forms. This potential result would clearly conflict with congressional intent to prevent significant deterioration with respect to particulate matter.

The EPA intends to deny State requests for deletion of section 107 TSP designations pending each State's adoption of PM_{10} increments. In support of this position, EPA will rely upon the introductory phrase in section 107(d)

which states "[f]or the purposes of . . . part C (relating to prevention of significant deterioration of air quality)" Although section 107 area designations with respect to TSP may no longer be appropriate in the absence of the TSP NAAQS, EPA will require the retention of the TSP designations for the purposes of Part C of the Act until PM_{10} increments are in place.

The EPA will also rely on its authority under section 301 to "prescribe such regulations as are necessary to carry out [its] functions" under the Act. That is, until PM_{10} increments are promulgated, it will be "necessary" within the meaning of section 301 to retain existing section 107(d) TSP designations so that the Class II TSP increments will continue to apply in Class II areas for particulate matter. However, as described earlier, States will have the opportunity to remove their existing TSP nonattainment designations by requesting to EPA that each area be redesignated as unclassifiable. The EPA will approve such redesignations on or after the date it approves each State's plan to attain and maintain the PM_{10} NAAQS.

The redesignation to "unclassifiable" pursuant to section 107 of the Act will enable the PSD preconstruction review requirements to apply to subsequent major new sources and major modifications proposing to locate in such redesignated areas. Hence, at the time that the first complete PSD application affecting the redesignated area is filed, the baseline date will be established for TSP and the amount of increment which would be consumed must be determined. The EPA plans to develop guidance to enable PSD sources and States to determine which changes, if any, in actual PM_{10} emissions, occurring during the time that the area was designated nonattainment, affect the amount of TSP increment consumed.

Once EPA promulgates PM_{10} increments, a dual increment system for particulate matter, i.e., TSP and PM_{10} , will exist. The EPA believes that a mandatory dual increment system will be unnecessarily burdensome and cumbersome. A partial remedy to a mandatory dual system exists in the fact that States will be given the opportunity to request the deletion of all or a portion of their existing section 107 area designations for TSP. In any area designated as attainment or unclassifiable for TSP, States may effectively end the applicability of the Class II increments for "particulate matter" under section 163 of the Act when the TSP area designation for such

source or permanently curtailing production or operating hours; and to change subparagraph (i)(3)(ii)(e) [now (a)(3)(ii)(e)] which currently requires that all emission reductions claimed as offset credit be federally enforceable. The EPA intends to apply the existing offset creditability criteria to PSD offsets until it takes final action on the August 25, 1983, proposal. In the event that such final action changes the offset creditability criteria in section 51.165(a), then the changes would also be applied with respect to the PSD offset program.

¹⁶ Section 166 of the Act requires in part that, for pollutants for which NAAQS are promulgated after August 7, 1977, EPA must promulgate regulations which "shall provide specific measures at least as effective as the increments established in section 163 . . . and may contain air quality increments, emission density requirements, or other measures."

areas is deleted. However, because the Class I increments for particulate matter under section 163 of the Act are not similarly affected by the deletion of the section 107 area designations, EPA intends to construct Class I PM_{10} increments that are equivalent in effect to the statutory Class I TSP increments. In the event that EPA can do so, it will then allow States to use these Class I PM_{10} increments as surrogates for the Class I TSP increments. Thus, PSD permit applicants and permit reviewers might not have to deal with two separate increment analyses.

g. Prevention of Significant Deterioration Monitoring

Today's action adds a second significance concentration for the purpose of requiring PSD preapplication monitoring data for particulate matter. Under the amended Part 52 PSD regulations, EPA will use the newly-defined significant ambient concentration, $10 \mu\text{g}/\text{m}^3$ (24-hour average) of PM_{10} , to help determine when a proposed PSD source must, prior to the submittal of its PSD application, collect and evaluate ambient PM_{10} data. See revised section 51.166(i)(8)(i) and section 52.21(i)(8)(i).¹⁷

Although TSP monitoring will continue to be required under the newly amended regulations, TSP will no longer be a pollutant for which a NAAQS exists. Therefore, discretionary authority in accordance with section 52.21(m)(1)(ii) and section 51.166(m)(1)(ii) is available to exempt TSP monitoring in certain situations. When an exemption is granted, the required air quality analysis would instead have to use air quality dispersion modeling to estimate ambient impact.

The Administrator will phase in new PM_{10} monitoring according to a transition program being set forth today

in the Part 52 PSD regulations. The three monitoring transition provisions are essentially the same as those in the proposal, except that time periods focus on the effective date of the PSD amendments for PM_{10} rather than the promulgation date of the amendments. For complete applications submitted during the first 10 months after the PM_{10} amendments become effective, no new PM_{10} monitoring will be required; however, the Administrator may require an applicant to consider existing air quality data (PM_{10} , PM_{15} , or TSP) if it is available and representative.¹⁸

When a PSD application would become complete after 10 months and not later than 16 months from the effective date of the PSD amendments for PM_{10} , the prospective PSD source must use existing PM_{10} or PM_{15} representative air quality data or collect PM_{10} monitoring data.¹⁹ The collected data can come from nonreference sampling methods. The amount of PM_{10} data collected during this period will involve at least 4 months of sampling, but will depend on the applicant's ability to collect more data before the application would otherwise become complete.

Finally, for complete applications submitted after 16 and not later than 24 months from the effective date of today's amendments, applicants must collect ambient PM_{10} data from reference method PM_{10} samplers. The amount of data collected from the

reference monitors must include at least 4 months of data but, as above, depends on when the PSD application would otherwise become complete.

2. Revised New Source Review Requirements for Particulate Matter

The fact that EPA will implement the PM_{10} NAAQS under a section 110 pathway significantly limits which Federal NSR requirements will apply to major sources with PM_{10} emissions. For the reasons described elsewhere in this preamble, the NSR requirements contained in section 51.165(b) [formerly section 51.18(k)] will apply, but the other major source NSR requirements for areas not attaining the NAAQS, including the nonattainment regulations under section 51.165(a) [formerly section 51.18(j)], the offset rule under 40 CFR Part 51 Appendix S, and the construction ban under section 52.24 will not apply with respect to PM_{10} .

The purpose of the section 51.165(b) NSR regulations is to require States to establish preconstruction review procedures which address major sources proposing to locate in designated attainment or unclassifiable areas and whose proposed emissions would cause or contribute to a NAAQS violation in any area. States have been required to implement a preconstruction review program which meets the requirements of section 51.165(b) for the particulate matter NAAQS which until now were based on the TSP indicator. Current State programs may or may not continue to protect the TSP-based primary and secondary NAAQS for particulate matter depending upon the language in their regulations pertaining to NAAQS. Such programs must continue to be implemented with respect to TSP NAAQS until the States revise their SIP's where necessary to define the NAAQS in terms of PM_{10} .

The EPA expects States to implement their section 51.165(b) NSR program in accordance with the same geographic and source applicability criteria as apply for PSD purposes with one exception. That exception pertains to the definition of "major source." The NSR source applicability requirement with respect to major sources is more inclusive than the PSD source applicability requirement in that "major" for NSR purposes includes all sources which have the potential to emit at least 100 tpy of any regulated pollutant as defined in section 302(j) of the Act. The EPA is amending the section 51.165(b) regulations to clarify the ambiguity that was present in the original requirements [see new section 51.165(b)(1)]. The Act requires that this

¹⁸ The EPA has revised its "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)" to fully describe Agency policy for implementing each of the transition provisions which are set forth in today's notice.

¹⁹ The April 2, 1985, proposal contained a discrepancy concerning the specific kinds of nonreference sampling methods that the Administrator would accept during the second transition period (after 10 but not later than 16 months from the PSD amendments). In the FEDERAL REGISTER preamble (p. 13150) there is a statement indicating that EPA would accept data based on TSP sampling for comparison with the proposed PM_{10} primary NAAQS. The inclusion of TSP as acceptable data was in error. The August 1984 draft of EPA's "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," which was made available for public comment simultaneously with the proposed PSD amendments, contained the Agency's intended policy which was to allow TSP data to be used during the second transition period only in comparison with the then proposed TSP secondary NAAQS (see section 2.5.2.2, p. 44 of the draft guidance). The Administrator's decision not to allow the use of TSP data for comparison with the PM_{10} NAAQS is based on the fact that the relationship between PM_{10} and TSP may vary quite widely on both a temporal (day-to-day) and spatial (site-to-site) basis so that no single conversion factor can be used to reliably determine PM_{10} concentrations using TSP data. Thus, the Administrator wishes to discourage the use of TSP data after the initial 10-month transition phase. After such time, sources should be able to gather at least 4 months of ambient PM_{10} or PM_{15} data.

¹⁷ The Administrator is taking this opportunity to correct several errors that have existed in the table of significant ambient concentrations since the time the table was first published on August 7, 1980. First, the averaging period for lead is being revised to a 3-month average. This would conform to the 3-month averaging period specified for the lead NAAQS. The averaging period for each criteria pollutant was intended to conform to the shortest averaging period for which a NAAQS was defined for that particular pollutant.

Second, the Administrator is revising the significant concentrations for beryllium and hydrogen sulfide because these concentrations were listed incorrectly. The beryllium concentration was promulgated as 0.0005, which was low by a factor of 2. It should have been $0.001 \mu\text{g}/\text{m}^3$. The hydrogen sulfide concentration was promulgated as $0.04 \mu\text{g}/\text{m}^3$, which is the minimum detectable concentration and did not reflect the factor of 5 as used to establish each of the other significant ambient concentrations. The correct value for hydrogen sulfide should therefore be $0.2 \mu\text{g}/\text{m}^3$.

definition of major source, in section 302(j) of the Act, be used for the purposes of section 110(a)(2)(D) of the Act, which is the primary basis for the section 51.165(b) NSR requirements.

In accordance with the April 2, 1985, proposal, the Administrator will allow States, as part of an approvable section 51.165(b) NSR program for PM_{10} , to establish an emission offset program. Such emission offset program, in order to be approvable by the Administrator, must be consistent with the PSD offset creditability criteria as described earlier (also see footnote 15). Emissions offsets must be applied as a prerequisite for approving a construction permit for any applicable major new or modified source whose prospective construction would otherwise cause or contribute to a PM_{10} NAAQS violation. "Cause or contribute to" would be determined in accordance with numerical criteria at least as stringent as the significance criteria set forth under new section 51.165(b)(2). States which experience more severe nonattainment problems may need to consider more stringent significance criteria to address new construction that would occur in the area of a nonattainment problem. In any case, the required offsets must be sufficient to compensate for the proposed source's ambient impact in the area of a NAAQS violation to the extent that the source's emissions would cause or contribute to the violation [see new paragraph 51.165(b)(3)].

With respect to federally-imposed construction bans already in effect for TSP, such bans will automatically be lifted when EPA's PM_{10} NAAQS in 40 CFR Part 50 become effective in 30 days. EPA finds that it will no longer have authority under section 110(a)(2)(I) of the Act to impose the construction ban against violations of the old TSP NAAQS. Under that statutory provision and 40 CFR 52.24, a construction ban is to apply within designated nonattainment areas failing to meet Part D of the Act for a major new source or modification that would cause or contribute to a violation of a NAAQS. While TSP nonattainment designations will be retained at least for the time being, the TSP NAAQS will be replaced by PM_{10} NAAQS in 40 CFR Part 50. Thus, EPA will be unable to continue imposing a ban to compel new Part D planning for TSP. States will, however, be expected to continue implementing their existing NSR rules, including those based on Part D of the Act.

V. Revised Regulations

A. Revisions to Part 51

1. Regulatory Reform

On November 7, 1986, EPA promulgated (51 FR 40656) restructured 40 CFR Part 51 regulations. Part 51 was changed by deleting obsolete provisions, removing unnecessary requirements, reducing reporting burdens on the States, and restructuring the entire part into a new format that will be easier to use than the existing format. Now restructured, Part 51 reflects the Act requirements pertaining to SIP's in general terms rather than specifying requirements by pollutant. This action simplifies formerly detailed regulations and provides more flexibility. In keeping with that effort, the revisions to Part 51 being promulgated today are in the new format. Since most references to specific pollutants have been removed from Part 51, only a small number of changes, aside from the NSR/PSD changes, are needed in this action to revise Part 51 in response to the revised particulate matter standards.

2. Basic State Implementation Plans Requirements

The new Subpart G, Control Strategy, of Part 51 contains general requirements that must be met by States in order that their PM_{10} SIP be approvable by EPA. For example, Subpart G requires that each SIP include a description of the control measures being adopted, a demonstration of the adequacy of those measures to provide for timely attainment and maintenance of the NAAQS, and a description of the procedures for implementing and enforcing those measures. These requirements were formerly included in sections 51.12 and 51.13.

The new Subpart K, Source Surveillance, requires provisions for recordkeeping by owners or operators of stationary sources, testing inspection, and enforcement of regulations through visible emission limitations. These requirements were formerly included in section 51.19. The Administrator will judge the PM_{10} SIP's against these requirements to determine their approvability. Where SIP's already contain certain provisions, such as a description of administrative procedures, these need not be repeated in the SIP revision submitted for the PM_{10} NAAQS.

3. Section 51.100, Definitions

The EPA is adding definitions to section 51.100 (formerly section 51.1) to help clarify the distinctions between the terms, "particulate matter," "particulate

matter emissions," " PM_{10} ," " PM_{10} emissions," and "total suspended particulates." A generic definition of "particulate matter" is added which parallels the use of the term in the revised criteria document for particulate matter. The term "TSP" is defined as particulate matter as measured by the high-volume method described in Appendix B of 40 CFR Part 50. The term " PM_{10} " is defined as particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method described in Appendix J of 40 CFR Part 50.

The terms " PM_{10} emissions" and "particulate matter emissions" are defined as those respective materials as measured during a source test that are emitted to the ambient air. For example, particulate matter emissions are finely divided solid or liquid material as measured during a stack test (e.g., EPA Reference Methods 5 or 17) of the source's emissions. The PM_{10} emissions are finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometers, as measured during a stack test of the source's emissions.

4. Section 51.151, Significant Harm Levels

The review and revision of health and welfare criteria for particulate matter and sulfur oxides and revisions to the NAAQS for particulate matter necessitate certain changes to the significant harm levels. The indicator for the particulate matter significant harm level is changed from TSP to PM_{10} to conform with the revision of the primary NAAQS for particulate matter.

Also the significant harm concentration level for particulate matter is revised. The criteria document and its addendum indicate that a scientific consensus exists linking increases in daily total mortality and particles during the historical London wintertime pollution episodes when particle levels, measured as British Smoke (BS),²⁰ and sulfur dioxide (SO_2) levels were both in the range of 500 to 1000 $\mu g/m^3$.²¹ Strong evidence exists showing an association between pollution and mortality at substantially lower levels. However, substantial disagreement exists as to whether such associations are causal at these low concentrations.* While the relative

²⁰ British Smoke is a pseudo-mass indicator related to small particle (size less than a nominal 4.5 micrometers) darkness. This particulate matter indicator was widely used in British and other European studies.

importance of SO₂ cannot be specified unequivocally, the conservative assumption (with respect to particles) is that similar responses might have occurred without substantial amounts of SO₂ present as discussed in the EPA staff paper and the staff paper addendum for particulate matter (p.98).²¹ In addition to potential SO₂ interaction, consideration must also be given to comparing BS and PM₁₀. Because the smoke reading responds to darkness instead of mass, the relationship between BS and a mass index such as PM₁₀ is particularly uncertain. To account for this, the staff paper (p. 99) derives general boundary relationships comparing BS and PM₁₀ units from the available aerometric data. The lower bound assumes a BS reading equals a PM₁₀ mass reading while the upper bound assumes PM₁₀ mass = BS reading + 100 µg/m³. The lower bound includes a margin of safety compared with the upper bound of the range. A reasonable estimate of PM₁₀ that may cause significant harm can be made by combining the conservative assumption that particulate matter above 500 µg/m³ (BS > 500 µg/m³) will cause increased mortality and the less conservative assumption that PM₁₀ = BS + 100 µg/m³. On this basis, EPA is changing the significant harm level for particulate matter to 600 µg/m³ measured as PM₁₀ (PM₁₀ = BS > 500 µg/m³ + 100 µg/m³).

The significant harm level for the combined levels of particulate matter (measured as TSP) and SO₂ are deleted. As noted in the staff paper (p. 71), it is not clear from the relevant scientific evidence that such a combined particulate matter SO₂ index provides any improvement in protecting against significant harm from particulate matter over a single significant harm level for particulate matter that is chosen with due consideration of the potential interactive effects. As discussed above, the proposed significant harm level for particulate matter does take into account, in a conservative fashion, potential SO₂ interaction. Continuation of the current combined TSP-SO₂ index is, therefore, no longer appropriate nor needed from the standpoint of particulate matter.

More detailed discussion of the information supporting these revisions can be found in the criteria document and staff paper which are available for inspection at the Central Docket Section (Docket No. A-82-37). The address of the Central Docket Section is given at the beginning of this notice.

5. Section 51.165, Permit Requirements

In subsection (a) of this section, the significance level for particulate matter

is deleted because the TSP-based NAAQS have been deleted and the new indicator for particulate matter, PM₁₀, is not subject to the provisions of this section concerning nonattainment NSR. In paragraph (b)(1) reference is added to paragraphs (a)(1) (iv) and (v) of section 51.165 which contain definitions of "new major stationary source" and "major modification." Also in paragraph (b)(1) a change is being made to replace "40 CFR 81.300 et seq." with "section 107 of the Act" where reference is made to area classifications. A table similar to the table in section III.A of Appendix S is being added in a new paragraph (b)(2) to indicate significant ambient impact concentrations. Within this table, the annual and 24-hour concentrations are being deleted for TSP since there is no longer an annual or 24-hour TSP NAAQS.²¹ Concentrations for the annual and 24-hour averaging times are being added to define significant ambient impacts for PM₁₀.

Paragraph (b)(3) is being added to clarify EPA's position that States may allow proposed major sources or major modifications to obtain emission offsets to compensate for their adverse ambient impacts where such sources or modifications would otherwise cause or contribute to a violation of a NAAQS. Finally, paragraph (b)(4) is being added to exclude a source from the requirements of paragraph (b) with respect to any pollutant for which the location of the source is designated as nonattainment.

6. Section 51.166, Prevention of Significant Deterioration of Air Quality

Various amendments to the requirements for the prevention of significant deterioration are being added to section 51.166. Paragraph (a)(6)(i) is changed to allow States 9 months from the effective date of any new PSD amendments to adopt and submit the appropriate SIP revisions. In paragraph (b)(23)(i), the existing significant emissions rate for particulate matter is changed so as to clarify that it is to be measured in terms of "particulate matter emissions." A new significant emissions rate for particulate matter is also added and is expressed in terms of "PM₁₀ emissions." Thus, there are significant emissions rates for two regulated forms of particulate matter, i.e., TSP and PM₁₀.

The increments for particulate matter in paragraphs (c) and (p) are clarified to

²¹ The annual and 24-hour concentrations for TSP in the table as it occurs in Appendix S are not being deleted at this time because States may continue to use these concentrations to address the TSP NAAQS which may remain in effect within their SIP's until the SIP's are revised with respect to PM₁₀.

indicate that the specified concentrations apply to ambient TSP. In paragraph (i) the significant ambient concentration for particulate matter is changed to indicate that the specified value applies to either TSP or PM₁₀. Also in paragraph (i), technical and clarifying amendments are being made to lead, beryllium, and hydrogen sulfide to correct for previous typographical errors. Finally, a new provision is being added that would allow States to adopt PM₁₀ transition provisions that parallel the proposed transition provisions in section 52.21.

7. Sections 51.322 and 51.323, Annual Source Emissions Reporting

The EPA requires annual reporting of actual emissions of criteria pollutants in order to perform various types of national analyses and to prepare national emissions trends reports. The EPA proposed to amend section 51.322, "Sources subject to emissions reporting," and section 51.323, "Reportable emissions data and information," to specify requirements for State reporting of both particulate matter emissions and PM₁₀ emissions on an annual basis. However, since the Administrator has determined that the indicator for both primary and secondary standards should be changed from TSP to PM₁₀, the promulgated amendments simply replace particulate matter emissions reporting with PM₁₀ emissions reporting. To provide time for States to develop the capability for reporting PM₁₀ emissions data and for EPA to store and retrieve such data, State reporting of PM₁₀ emissions data is to begin with calendar year 1988 emissions. The requirement to report particulate matter emissions data ends with State reporting of calendar year 1987 emissions.

8. Revisions to Appendix L

Appendix L to Part 51 contains example air pollution episode levels and contingency plans for the purpose of preventing air pollution from reaching the significant harm levels prescribed in section 51.151. To conform with the revisions to the significant harm level for particulate matter, the Administrator is making the following revisions to the example episode levels for particulate matter:

(1) The indicator for particulate matter episode levels is changed from TSP to PM₁₀, as it is for the significant harm level;

(2) The combined particulate matter/sulfur dioxide episode levels are deleted;

(3) The example alert level for particulate matter (measured as PM_{10}) is changed to $350 \mu\text{g}/\text{m}^3$, 24-hour average;

(4) The example warning level for particulate matter (measured as PM_{10}) is changed to $420 \mu\text{g}/\text{m}^3$ 24-hour average; and

(5) The example emergency level (measured as PM_{10}) is changed to $500 \mu\text{g}/\text{m}^3$, 24-hour average.

The basis for changing the indicator for particulate matter and for deleting the combined particulate matter/ SO_2 episode levels is the same basis as discussed above for the revisions to section 51.151. With respect to example episode levels, the proposed alert level reflects the upper bound of the range of interest in the staff paper. The staff paper concludes that at or above $350 \mu\text{g}/\text{m}^3$ health effects are likely to occur in certain sensitive population groups. Therefore, it would be appropriate under the episode criteria to initiate first stage control action when this ambient level of particulate matter occurs. The warning and emergency levels are set at approximately equal increments between the alert level and the significant harm level. This approach provides opportunity for the control actions associated with each episode level to take effect before the next stage is triggered and additional control actions become necessary.

9. Revisions to Appendix S

In Appendix S, the emission rate which defines significant amounts for "particulate matter" in paragraph II.A.10(i) is changed to clarify that such emissions are to be measured as "particulate matter emissions," consistent with the newly defined term added to section 51.100. The new indicator for particulate matter, PM_{10} , is not subject to the nonattainment provisions of this Appendix.

B. Revisions to Part 52

1. Section 52.21, Prevention of Significant Deterioration of Air Quality

The amendments for the Part 52 PSD regulations in section 52.21 include the amendments described for section 51.166 concerning (1) the significant emission rate for particulate matter; (2) the ambient increments for particulate matter; and (3) the significant ambient concentrations for particulate matter, lead, beryllium, and hydrogen sulfide. Also, in paragraph (i)(4) new provisions are being added to grandfather certain applicants from additional PSD review resulting from new PM_{10} requirements when prescribed criteria have been met by the applicant. In paragraphs (i)(11), (m)(1)(vii), and (viii), new transition

provisions for preconstruction monitoring are added to exclude applicants from PM_{10} monitoring methods depending on when a complete application is submitted relative to the promulgation date of the PM_{10} NAAQS. Finally, paragraph (w)(2) is changed to replace the date "June 28, 1978," with the date of the PSD requirements in effect immediately preceding the effective date of the new PM_{10} amendments.

2. Section 52.24, Statutory Restriction on New Sources

The provisions for prohibiting construction in certain designated nonattainment areas are revised by deleting the significant emission rate for particulate matter from the definition of "Significant" under paragraph (f)(12). This emission rate is no longer needed because, through the deletion of the TSP NAAQS, construction ban provisions of this section no longer apply to particulate matter.

VI. Public Participation

The proposal to implement the revised particulate matter standards drew many responses during the public comment period. Since the issues raised by commenters had a significant effect on the contents of today's final rule, EPA feels it is important to make the connection between comments and the development of this final rule as clear as possible.

Accordingly, there is a separate discussion below for each part of the proposal that drew comments in which issues of major importance were raised. In order of presentation, these parts are: legal issues, attainment probability estimates, SIP development policy, PSD and NSR issues, technical, miscellaneous, and procedural issues.

Each discussion opens with a brief review of what was proposed. This is followed by a summary of the issues raised by the commenter and EPA's response. The EPA's response to comments not addressed in this preamble may be found in the docket.

A. Comments on Legal Issues

A full discussion of the legal issues raised in the proposal is presented in section III above.

1. Comments Favoring an Exclusive Section 110 Pathway

Many commenters who supported use of section 110 exclusively for implementation of the revised PM_{10} NAAQS argued that Part D by its own terms does not apply to any revisions to a NAAQS. The EPA does not agree with this premise. As explained in Section III

above, if this were true, a relaxation of a NAAQS that reduces a State's planning burden would shield an area that had failed to meet the original NAAQS from the strict Part D requirements despite the fact that it would now be easier for the area to attain. It is unlikely that Congress would have intended such a result. The term "national ambient air quality standard" in section 171(2) must therefore encompass revised standards as well.

These commenters similarly pointed to the fixed attainment dates in Part D as evidence that Part D could not apply to any NAAQS revisions after the statutory 1982 attainment date. However, as a matter of statutory construction, the duty to demonstrate attainment by the Part D attainment dates should properly still apply to NAAQS relaxations after 1982 that reduce an area's planning burdens and ease opportunities to demonstrate attainment, or that have no significant effect on planning burdens.²² There is no reason for Congress to have provided such areas with additional time to prepare SIPs to meet such revisions. All such areas were already under a duty to demonstrate attainment of the prior NAAQS by 1982, and no further planning would be required of such areas by virtue of such relaxations. Where NAAQS revisions do impose significant additional planning burdens, States could not be expected to show that they could attain by dates that had already passed before the planning burdens were imposed and thus Congress would not have wanted Part D to apply to such areas.

One commenter pointed to section 406(d)(2)(B) of the 1977 amendments, arguing that this provision required the use of section 110 in all cases unless the Act expressly stated otherwise. In fact, this provision makes no mention of section 110, but merely states that SIP revisions should be submitted within 9 months of promulgation of EPA regulations necessitated by the 1977 Amendments.

One commenter discussed the legislative history of Part D and concluded that Congress only intended it to apply in 1977 to areas that then exceeded the then-existing NAAQS. These arguments support EPA's position that Part D should not apply to NAAQS revisions that impose significant new

²² The EPA notes that under its sanctions policy (48 FR 50686), EPA would in practice approve a Part D SIP and lift the construction ban upon a demonstration that the SIP would provide for attainment as expeditiously as practicable after 1982. This policy would apply to particulate matter SIPs in all areas subject to Part D.

planning burdens. But it would drastically undercut any benefits of the program Congress established in 1977 to remove Part D applicability as to NAAQS revisions that reduce planning burdens and ease opportunities for attainment of the NAAQS as they existed in 1977, the very standards Congress sought to see attained when it created Part D. Any area not in attainment of such a revised standard would presumably have exceeded the pre-1977 NAAQS as well.

Several commenters supporting use of section 110 cited *Bethlehem Steel Corp. v. EPA*, 723 F.2d 1303 (7th Cir. 1983), quoting the court's statement that the Part D deadlines only make sense as applied to areas that data indicated in 1977 were in violation of then-existing NAAQS. This case had to do with EPA's authority to reclassify areas so as to bring new areas not previously subject to it under Part D. The EPA's position that revisions which impose significant new planning burdens are not subject to Part D is consistent with this case, in which the court concluded that EPA could not unilaterally apply the strict Part D requirements to new areas after 1977. This case does not support the position that Part D would not apply to revisions that impose no new planning burdens because all areas subject to Part D under such revisions should already have been subject to Part D under the original pre-1977 NAAQS.

A few commenters cited *U.S. Steel v. EPA*, 595 F.2d 207 (5th Cir. 1979), asserting that the court had construed section 406(d)(2) of the 1977 Amendments as applying section 110 even to SIP's subject to Part D but incapable of meeting its deadlines. Actually, this case merely held that the relevant Part D plans would be due within 9 months of necessary EPA regulations as stated in section 406(d)(2)(B) and made no reference to section 110.

Finally, one commenter cited the opening sentence of the Supreme Court decision in *Chevron USA v. NRDC*, 104 S. Ct. 2778 (1984), where the Court stated that Congress in 1977 enacted additional requirements for areas that had failed to achieve previously established standards. This statement is merely descriptive of Congress' actions in 1977 and does not reflect any thought on the Court's part as to the relative applicability of section 110 or Part D to future NAAQS revisions.

Numerous commenters addressed EPA's alleged concern that application of section 110 to all NAAQS revisions, including relaxations, would automatically shield States from having to show that SIP relaxations would not

interfere with attainment and maintenance of the revised NAAQS. These commenters apparently misunderstood EPA's actual concern that use of section 110 in cases of NAAQS relaxation would shield areas from the strict Part D requirements despite eased attainment burdens. Consequently, the commenter's suggestions that existing Part D SIP's would continue to apply pending SIP revisions to comply with the revised NAAQS are not relevant to EPA's actual concern over ultimate SIP relaxation in such cases. Under either section 110 or Part D, States would still have to show that any SIP relaxation would not interfere with attainment and maintenance of the revised NAAQS.

One commenter alleged that historical precedent supports use of the section 110 pathway in all cases. The commenter pointed first to an EPA decision in 1979 to accept less than all reasonably available control measures in a Part D plan so long as reasonable further progress toward attainment could be demonstrated as evidence of EPA's alleged past practice of dispensing with certain Part D requirements. In reality, EPA merely stated in 1979 its interpretation that Part D only requires implementation of such measures as necessary to insure reasonable further progress and attainment as expeditiously as practicable, and that Part D does not require implementation of additional cost effective measures that would not further expedite attainment. The EPA did not purport to dispense with any applicable Part D requirements (see 44 FR 20375).

This same commenter also stated that EPA's 1979 position on implementation of the revised ozone standard did not support use of Part D for NAAQS relaxations. The commenter alleged that EPA merely concluded that SIP revisions would not be required as a result of the ozone NAAQS revision since States could keep more stringent requirements in their SIP's if they desired. It is true that EPA concluded that additional SIP revisions would not be required to implement the relaxed ozone standard. However, EPA also stated that the deadline for Part D SIP submission established in the 1977 Act would not be affected by the ozone NAAQS revision (44 FR 8202). Implicitly, EPA concluded that Part D would continue to apply to all areas that failed to meet the new relaxed ozone standard.

Several commenters noted that use of Part D for revisions that did not impose significant new planning burdens could result in a more stringent implementation scheme for welfare-

based secondary standards than for health-based primary standards if only the revised primary standard imposed new planning burdens, a result that Congress allegedly would not have intended. Since EPA has concluded that the primary and secondary PM₁₀ standards should be identical in all respects, this hypothetical situation will not arise for PM₁₀. The EPA notes that a similar situation could also arise if EPA revised a primary standard to impose additional planning burdens while making no revision to a secondary standard for the same pollutant. However, as discussed in section II.B.1.b.(4) above, EPA has determined that sanctions do not apply for failure to have Part D revisions for a secondary NAAQS.

Finally, some commenters suggested that an exclusive section 110 pathway would be preferable in that it would relieve EPA of the duty of determining which revisions imposed additional new burdens. The EPA agrees that a uniform section 110 pathway would be simpler to administer, but believes that the adopted interpretation is the better reading of the statute.

2. Comments Favoring an Integrated Section 110 and Part D Pathway

Several commenters urged EPA to read section 110 and Part D as an integrated whole, applying Part D to any areas not attaining any NAAQS. These commenters noted that section 110 specifically incorporates Part D in sections 110(a) (2) (D), (H) and (I). However, EPA reads these cross references as only incorporating Part D to the extent it would otherwise apply by its own terms. The EPA does not see that the cross references reconcile the inherent conflict concerning applicability of section 110 and Part D.

In support of the integrated approach, one commenter cited *City of Seabrook v. EPA*, 659 F.2d 1349 (5th Cir. 1980). There, the court held that EPA's duty to approve or disapprove SIP's under section 110 applies also to plans submitted under Part D. Again, EPA believes this refers only to Part D SIP's submitted for areas subject to Part D by its own terms. The decision merely clarifies the cross references to Part D in section 110 and makes no statement about applicability of either pathway to new or revised standards.

One commenter supporting the integrated approach addressed the conflicting attainment deadlines in section 110 and Part D by suggesting that the Part D deadlines provide exceptions to the 3-year deadline in section 110 only for those areas

originally designated nonattainment in 1977. The commenter thus felt that any areas designated nonattainment at later dates would still be subject to Part D but would have to attain as expeditiously as practicable, but in no case later than 3 years, as required by section 110. This argument ignores the plain language of section 172(a)(1) which establishes the alternative Part D deadlines for "each such area" subject to Part D. The commenter did not provide further legal support for its interpretation.

Another commenter supporting this position pointed out that section 110 sets the general rule, i.e., the 3-year deadline, while Part D merely establishes an exception to the rule for certain areas. Since the exception would not make sense as applied to areas not in attainment of a new or revised NAAQS after 1982, the general rule of section 110 would necessarily apply. Again, this argument ignores the clear sense of section 172(a)(1) that the 1982 deadline apply to all areas subject to Part D.

A different commenter suggested resolving the attainment deadline issue by acknowledging that the 1982 deadline would apply to all areas subject to Part D, but giving the States the opportunity to demonstrate under section 110(a)(2)(H)(i) that more time would be needed to complete additional planning necessary to attain the revised standard. The commenter suggested that if EPA found the demonstration adequate, it could hold the section 110(a)(2)(I) construction ban in abeyance. This may be possible in practice, but EPA believes it is not relevant to the statutory construction of Part D. Congress required in section 110(a)(2)(1) that for all areas subject to Part D each SIP must provide for a ban that would apply unless the SIP provides for meeting all of the requirements of Part D, which necessarily includes the Part D 1982 attainment deadline. Given this, Congress would not have intended Part D to apply to areas that could not possibly plan to meet the 1982 attainment date because a revised NAAQS imposes significant new planning burdens after that date.

As a policy matter, one commenter noted that failure to apply Part D to the revised PM₁₀ standard would produce the undesirable result that implementation of the revised standard for particulate matter would proceed under weaker substantive provisions than the original TSP standard, which was one of the standards Congress clearly intended to be subject to the strict Part D requirements. This result would occur, but is not necessarily undesirable in light of the significant

new planning burdens imposed upon States to demonstrate attainment of the revised PM₁₀ standard. Part D is clearly a remedial provision and should not apply to a new or revised standard that imposes significant additional planning burdens which States have never previously addressed. This is so even if the standard applies to a pollutant which had previously been subject to a different standard for which States had failed to plan adequately.

Commenters also reasoned that EPA should use an integrated approach because of beneficial program results, such as continuation of existing Part D SIP's and sanctions and alleviation of the need to determine which revisions impose additional planning burdens. Whether or not EPA would like to see these results, they do not provide a different basis for determining statutory applicability where EPA can do so based upon the statutory language and legislative intent.

One commenter claimed that EPA's past practice did not support its current position. The commenter pointed out that although EPA did apply Part D to the 1979 ozone relaxation, it did not then indicate that Part D would not have applied if the revision had imposed significant new planning burdens. This is true, but EPA had no reason to do so because Part D did in fact apply in that instance. The commenter similarly found no precedent in the case of EPA's 1978 statements that Part D did not apply to the lead NAAQS because it was an entirely new, as opposed to a revised, standard. Presumably, the commenter felt that areas which had failed to plan adequately to demonstrate attainment of the original particulate matter NAAQS should not be relieved of the strict Part D requirements in implementing the revised NAAQS for particulate matter. The EPA, however, believes that a revised NAAQS which imposes significant new planning burdens is similar to a new NAAQS in that it imposes burdens on the States which they were not subject to prior to the revision and which they consequently should not be penalized for failing to have completed.

This same commenter also noted that many areas which Congress subjected to Part D in 1977 had not submitted SIP's prior to 1977 and thus had full planning burdens ahead of them. This may be so, but the relevant fact is that those planning burdens were originally imposed in the 1972 Act. Whether or not given areas had complied with previous planning duties, Congress created Part D in 1977 to encourage areas that either failed to plan at all or planned poorly to

promptly complete the planning necessary to show attainment of the standards that should have been attained years earlier.

This commenter also pointed to the sum of congressional action since 1967 in which Congress reacted to State's planning failures by granting more time but only while imposing specific additional requirements. This line of reasoning is inapplicable to NAAQS revisions which impose significant new planning burdens because States that have had no previous opportunities to meet new planning burdens can hardly be said to have failed to do so.

One commenter argued that EPA should apply Part D merely because implementation under section 110 has produced little progress toward attainment. Whether this is true or not, it does not provide a legal basis for applying Part D rather than section 110.

This same commenter pointed to EPA's policy for newly designated nonattainment areas, indicating that there EPA applied Part D but substituted alternative dates for the 1979 SIP submittal and 1982 attainment dates where these dates had passed prior to discovery of a nonattainment problem. In that case, EPA was faced with a situation where Part D appeared to clearly apply. The EPA attempted to fashion a reasonable approach for applying Part D to areas found to be in nonattainment after the normal Part D deadlines had passed. There, EPA attempted to effectuate congressional intent as closely as possible by honoring the spirit of the statute since the literal language did not fit the situation. The EPA's actions in that context are not relevant to a statutory interpretation of the proper applicability of Part D to new or revised NAAQS.

In addition, EPA notes that the court in *Bethlehem Steel Corp. v. EPA*, supra, held that EPA could not redesignate newly found nonattainment areas so as to bring them under Part D and apply the above-described schedule in the absence of a State request. The Court relied heavily on the onerous nature of Part D and its conviction that EPA should thus not unilaterally create analogies to Part D and apply them to areas not clearly subjected to Part D by Congress. This line of reasoning would apply equally to areas subject to revised standards imposing significant new planning burdens, and consequently supports EPA's statutory interpretation that Part D does not apply to such areas.

B. Comments on Use of the Probability Guideline

Because of a lack of PM_{10} data, EPA proposed to use statistical probabilities to estimate PM_{10} concentrations from the relatively abundant TSP data. The EPA calculated this relationship by relating available PM_{10} and Inhalable Particulate (IP) monitoring data to collocated TSP monitors. As discussed earlier, procedures for using statistical probabilities in the absence of ambient PM_{10} data were explained in the probability guideline (EPA 450/4-86-017).

Commenters were concerned with the concept of the guideline as well as technical problems with the guideline. First, they felt that EPA should base its SIP development program on actual ambient air quality data, not probability estimates. To do this, the commenters stated, EPA should allow sufficient time to obtain adequate data on the new standards, identify problem areas, and develop and submit necessary revisions to SIP control strategies. *Second*, there were several comments of a technical nature. The commenters were concerned about many issues, among them the use of a national probability distribution instead of regional and seasonal distributions, and the use of PM_{10} /IP ratios instead of PM_{10} /TSP distribution ratios.

In response to the first comment, when EPA promulgates a new or revised standard, the Act requires the States to develop a SIP within 9 months to show attainment of the standard. This schedule presents a problem because some areas do not yet have sufficient PM_{10} air quality data to determine their attainment status. However, TSP air quality data is readily available and, together with available PM_{10} data, a reasonable probability of the attainment status of the area may be determined. Thus, the likelihood that any given area will or will not attain the PM_{10} NAAQS can be determined by using the available TSP and PM_{10} data as explained in the probability guideline. The EPA is using its estimate of the probable attainment status of an area in conservative manner by requiring only areas with at least 95 percent probability of nonattainment to submit full SIP's within 9 months. Areas with less than 95 percent probability have additional time to collect PM_{10} data and determine their attainment status prior to submission of full SIP's.

In response to the second group of comments on the probability guideline, EPA has made several technical revisions in the guideline. A number of comments dealing with the basis for the

distribution were anticipated and resolved through an evaluation and refinement of the procedure conducted concurrently with the public review period. The results of this study are described in a report, *An Examination of 1982-1983 Particulate Matter Ratios and Their Use In The Examination of PM_{10} NAAQS Attainment Status* (EPA-450/4-85-010) which is in Docket No. A-82-38.^m The report reexamines the seasonal and regional specific ratio issues and supports the use of a national distribution. As a result of this study and the public comments, the guideline, including the probability curves, has been revised. The curves are now based on only elevated TSP and PM_{10} data collected concurrently in 1982 and 1983. The recommended procedure no longer relies on a single conversion factor between IP and PM_{10} . A distribution has been prepared for PM_{10} /IP data. Also the guideline was clarified in several areas to address comments that were prompted by misinterpretation of its instructions. The guideline has been updated just prior to promulgation to incorporate charts for the specific level of the NAAQS, thus simplifying the computations somewhat. A computer program is available to help accomplish the computations. A detailed response to the technical comments on the Guideline and the corresponding revisions have been placed in Docket No A-82-38.

C. Comments on the SIP Development Policy

1. Area Grouping Policy

The EPA proposed the same SIP development policy described in section IV(c) above with one exception. The EPA proposed to use PM_{10} and $PM_{2.5}$ data where available to determine when a control strategy demonstration is needed. Where sufficient PM_{10} data are not available, EPA will use TSP data and the probability guideline to classify areas into Group I, II, or III. Group I areas are required to submit a complete SIP within 9 months that provides for attainment of the NAAQS. For Group II areas, a State would submit a "committal" SIP which need not contain a full demonstration of attainment and maintenance. The "committal" SIP would pledge the State to gather ambient PM_{10} data, analyze and verify the data, and develop an adequate SIP where nonattainment is shown. The EPA proposed to allow up to 18 months from approval of the committal SIP to collect and analyze PM_{10} data. The EPA's final policy is to allow up to 37 months from today to collect and analyze PM_{10} data. If a State notifies

EPA, during that time, that they have found a violation of the PM_{10} standard in a Group II area, the State has 6 months thereafter in which to develop and submit a control strategy to EPA. The strategy must then show attainment as expeditiously as practicable but no later than 3 years from the EPA's initial approval of the committal SIP as required by the Statute. The EPA will presume that the existing SIP in Group III areas (less than 20 percent probability of nonattainment) is adequate to maintain the standards.

Industrial and governmental organizations that commented felt the SIP development policy should be based on PM_{10} air quality data and not on probability estimates based on TSP data. The commenters recommended several paths to achieve this end. The paths basically would result in EPA allowing States time to develop a PM_{10} data base before requiring a control strategy. Commenters suggested this could be done in a variety of ways, such as postponing the effective date of the PM_{10} NAAQS or classifying all high nonattainment probability areas as Group II for committal SIP's. Commenters also felt an area might be moved from one group to another without a thorough evaluation of the data. They wanted detailed guidance on how EPA would consider such issues as unusual events, poor quality control, and installation of recent additional controls in an area after the air quality was measured.

The environmental groups generally felt that EPA should follow the letter of the law and require complete plans for all areas within 9 months of promulgation. Even though EPA states that Group II areas are to attain the NAAQS within 3 years of approval of the committal SIP, such areas are not required to submit a full control strategy for EPA approval until 3 years after promulgation. The environmental groups contend that even if such a schedule is adhered to, it is very unlikely that a complete control strategy will be implemented within 1 year of submittal to EPA.

Many PM_{10} monitoring sites have been put into operation since the notice of proposed rulemaking was published April 2, 1985. It is EPA's policy to use valid PM_{10} data to determine the attainment status of an area in preference to TSP-based probabilities. However, 3 years of PM_{10} data are required to demonstrate attainment in accordance with Appendix K of 40 CFR Part 50. Accordingly, EPA developed statistical relationships between TSP and PM_{10} data, reviewed and confirmed

the validity of those relationships and thus feels justified in using those relationships, where sufficient PM_{10} data are not available, to predict PM_{10} attainment status. After a preliminary area classification based on 1983-1985 TSP data, the EPA will consult with State and local agencies to evaluate available PM_{10} data and consider other factors affecting the air quality data and the existing SIP. Thus, EPA believes that the State and local agencies will have adequate opportunity to discuss issues which might determine the final grouping of an area. The EPA's policy is to require only areas with high probability (>95 percent) of violating the PM_{10} NAAQS to immediately begin developing a SIP. Other areas will be allowed up to 3 years from promulgation to collect additional air quality data and determine their attainment status. The amount of emission reduction required for an area is not based entirely upon air quality measurements exceeding the NAAQS. The EPA also requires an examination of allowable emissions, meteorological conditions, and the use of proportional models to demonstrate that air quality will be protected under the worst conditions.

Regarding the concern of environmental groups, EPA proposed to allow up to 18 months for air quality monitoring following approval of a committal SIP. Since a State can take 9 months to submit a SIP and EPA may take 6 months to approve it, a State would not be required to notify EPA of the adequacy of the existing SIP for up to 33 months after promulgation. This notification date would be even later if the date of SIP approval slipped. Therefore, EPA has decided to set the latest date for notifying the Agency of the adequacy of the existing SIP at 37 months from promulgation. This schedule allows 3 years of air quality data to be collected, yet it sets a firm date for declaring the attainment status of an area. The final date of declaration may be 4 months later than originally proposed or several months earlier if SIP approval is delayed. The EPA realizes that it may be difficult to implement a SIP and attain the NAAQS within 3 years after approval of the committal SIP. However, EPA believes that the worst nonattainment situations can be identified quickly, and the States would not need the entire 37 months to collect data. To assist the States, EPA has supplied them with several hundred PM_{10} samplers. These samplers have been deployed in areas of high probability of nonattainment on a priority basis. In addition, EPA monitoring regulations (40 CFR Part 58)

require every other day sampling in Group II areas in order to expeditiously confirm their attainment status. Thus, any significant problems with attaining the PM_{10} standards should be found early. Areas requiring the entire 37 months of monitoring to determine their attainment status should be very close to the NAAQS and require only slight adjustments in the existing SIP to show attainment. Thus it should be possible to implement these minor changes in less than 1 year.

2. Fugitive Dust Policy

The Administrator proposed to continue the fugitive dust policy as it was implemented in urban and rural areas exceeding the TSP NAAQS.¹ Reaction to the proposal to continue the existing fugitive dust policy was received from many industrial groups, environmental groups, and State and local agencies. Comments ranged from suggestions that the policy be expanded to opposition to continuing the existing policy.

The existing policy would place all Rural Fugitive Dust Areas (RFDA's) in Group III for SIP development. The EPA has developed three alternatives to that policy. The first alternative would place RFDA's in Group I, II, or III based upon the area's probability of not attaining the annual or 24-hour PM_{10} NAAQS. The second alternative would place RFDA's in Group II or III based upon the area's probability of not attaining annual or 24-hour PM_{10} NAAQS. The third alternative would place RFDA's in Group II or III based only on the area's probability of not attaining the annual PM_{10} NAAQS. These alternatives are discussed in more detail in EPA's proposal, published elsewhere in today's Federal Register.

Until EPA issues a revised policy, it is continuing the existing rural fugitive dust policy. To do otherwise would require States to expend resources to develop what may turn out to be unnecessary SIP's.

3. Emissions Trading (Bubble) Policy

It was noted in the proposal notice that past emission trade agreements cannot interfere with a State's efforts to attain and maintain the revised NAAQS. Sources were warned in the initial bubble policy published on December 11, 1979 (44 FR 71780), that if EPA revised the TSP NAAQS to a PM_{10} NAAQS some alternative approaches initially approved by EPA might no longer be adequate to protect the PM_{10} NAAQS. On this basis, States were advised in the proposal notice to consider bubbles approved prior to development of PM_{10} SIP's as any other

existing SIP provision and therefore subject to revision.

The recently published final Emissions Trading Policy Statement Technical Issues Document confirms that if ambient violations of any standard are discovered in an area where EPA has approved a trade, sources in the trade could potentially be subject to requirements for additional emission reductions just as all other sources in the area [see 51 FR 43814, 48847 (December 4, 1986)].

Commenters stated that revisions of the TSP NAAQS should not automatically trigger reconsideration of bubble plans, especially in Group II and III areas. They alleged that control techniques applied in bubbles to meet the TSP standard are likely to be the same techniques that would be used to meet a PM_{10} NAAQS, and it was therefore unnecessary to reopen bubble plans to ensure attainment of the revised standard. Also, one commenter thought it would be inequitable for EPA to reopen an agreement with a source after the source has invested in controls.

It is not EPA's intent to automatically reopen all emission trading plans. The EPA merely intended to make three points in the notice of proposed rulemaking:

(1) Bubble agreements cannot interfere with a State's efforts to attain and maintain the revised NAAQS;

(2) States should consider bubbles that were approved after publication of the policy but prior to development of PM_{10} SIP's as any other existing SIP provision; and

(3) Sources were warned in the initial bubble policy published on December 11, 1979, that EPA was considering revising its particulate matter NAAQS and that some bubbles initially approved by EPA might no longer be adequate under the revised NAAQS.

For example, a process source emits 100 tpy of PM_{10} . Instead of controlling the process source, emissions from a source of fugitive dust were reduced 100 tpy in order to attain the TSP standard. If only half of the fugitive dust (i.e. 50 tpy) was PM_{10} it may be necessary for the State to require some portion of the 100 tpy of PM_{10} from the process source to be controlled in order to attain the revised PM_{10} NAAQS.

D. Prevention of Significant Deterioration/New Source Review Program

In his April 2, 1985, proposal, the Administrator announced that the proposed revisions to the NAAQS for particulate matter would potentially affect six existing sets of

preconstruction review requirements contained in Parts 51 and 52 and would, in turn, lead to substantial revisions to existing SIP procedures for PSD and nonattainment NSR (PSD/NSR). Because of some uncertainties as to which implementation pathways would apply to the revised primary and secondary NAAQS, the program proposal included several alternative approaches to account for the different outcomes possible. Many comments were received on this part of the proposal, describing support of specific implementation pathways and the resulting PSD/NSR requirements. This section presents a review of the relevant portions of the original proposal, the comments, and EPA's responses.

1. Revised Prevention of Significant Deterioration Program for Particulate Matter

a. *Effective Date of the Part 52 Federal Prevention of Significant Deterioration Regulations.* In the proposal, the Administrator announced his inclination to make the changes to the Part 52 PSD regulations effective immediately upon promulgation of the revised PM_{10} standards. The intended effect of such an outcome was that EPA and presumably State and local agencies who had been delegated the Administrator's PSD authority would be required to begin immediately to implement the new PSD requirements for PM_{10} on the effective date of the PM_{10} NAAQS, even though States with EPA-approved PSD SIP's would have an additional 9 months to adopt new PSD rules for PM_{10} and submit them for EPA approval.

While expressing his inclination to require immediately effective Federal PSD amendments for PM_{10} , the Administrator acknowledged some potential problems concerning the legal ability of delegated agencies to proceed with their implementation of the PM_{10} requirements under section 52.21. First, it was known that the delegation agreement between EPA and the State or local agency in some cases did not require that the delegatee implement new requirements based on future standards or amended procedures. Second, some PSD delegations could only be implemented after equivalent PSD requirements were enacted into law at the State or local level (although not submitted to EPA as part of an approved SIP). Consequently, even with an adequate delegation agreement, some State or local programs might not be able to implement PM_{10} requirements until their own PSD rules are appropriately changed.

For these reasons, the Administrator said he would consider delaying the implementation of the PM_{10} changes where EPA or its delegates had PSD permitting responsibility. To assist in this consideration, he solicited comments on the merit of delaying the effective date of the Part 52 regulations and asked whether an immediate conversion to PM_{10} was necessary to provide adequate environmental protection for particulate matter.

Most commenters expressed their support for EPA to delay its implementation of the PM_{10} amendments under the Part 52 PSD regulations until all States are required to have approved PM_{10} preconstruction review procedures in their SIP's. However, the reasons given typically did not relate to problems associated with delegation agreements or other potential legal problems that might occur during the transition period.

Several commenters indicated that a delay would be desirable because it would result in a uniform implementation scheme that would keep the PSD permitting requirements essentially the same in all States. In this way, the commenters noted, Congress' original concern about possible interstate competition from new industry would generally be eliminated. Some commenters stated that the delay would give EPA and the States time to work out any technical difficulties with the new rules before they become effective. Two commenters felt that the delay would allow additional time to expand the data base for developing PM_{10} emission factors. One commenter stated simply that the delay would result in less complication and confusion.

Concerning potential legal problems, one air pollution control agency favored a delay in the new PM_{10} requirements in order to provide additional time to resolve any regulatory or statutory problems in making the transition from TSP to PM_{10} . However, the agency commenting did not specify whether it would experience any such problems. On the other hand, another air pollution control agency fully supported EPA's immediate implementation of the PM_{10} amendments because such action on EPA's part would enable agencies desiring full PSD delegation to make their request as soon after promulgation as they are able.

A number of the commenters who supported EPA's delay of the PM_{10} requirements added that a continuation of the existing requirements for a TSP review under the PSD program would provide adequate interim protection for

the particulate matter NAAQS. This was a key concern to EPA when the possibility of a PM_{10} program delay was originally announced. The EPA generally believes that its continued implementation of a TSP review under the PSD program would have been acceptable as long as such review provided for protection of the TSP NAAQS. However, EPA failed to adequately consider the fact that on the effective date of the revised NAAQS for particulate matter, the previously effective TSP NAAQS will no longer exist and consequently EPA will not be able to require PSD applicants to demonstrate that their proposed emission increases will not violate the withdrawn TSP NAAQS. The PSD regulations at 40 CFR 52.21(k) require PSD sources to demonstrate that their emissions will not cause or contribute to air pollution in violation of "[a]ny national ambient air quality standard. . . ." At any time, the applicable NAAQS encompassed by this PSD provision are those standards which are independently defined under 40 CFR Part 50. Moreover, the effective dates of the NAAQS are independently established when the standards are promulgated and are clearly not affected by the status of any amendment to the PSD program.

If EPA does not amend the Part 52 PSD regulations as of the effective date of the revised NAAQS for particulate matter, PM_{10} will be subject to PSD review but EPA's PSD procedure would be devoid of the various PM_{10} thresholds (for source applicability, ambient monitoring, and significant ambient impact) and transition provisions which are necessary to determine when and to what extent a PM_{10} review is to be required. Thus, given the fact that PM_{10} NAAQS become effective 30 days from promulgation, as published elsewhere in today's Federal Register, EPA believes that it would not be appropriate to consider a delay beyond the effective date of the PM_{10} NAAQS in its implementation of the PM_{10} amendments to the Part 52 PSD regulations.

b. *Source Applicability.* The Administrator proposed a new emission rate within section 52.21 (b)(23)(i) that would define "significant" for PM_{10} . The new rate would be used to determine when PM_{10} emissions (as opposed to particulate matter emissions which relate to TSP) would require PSD review. An emission rate lower than the new significant emission rate would allow a source to be excluded from PSD review, with respect to PM_{10} , on the grounds that such lower emissions would be insignificant, i.e., de minimis.

In the proposal, the Administrator set the significant emission rate for PM₁₀ at 15 tpy. He explained that the approach used to derive this value was based on the methodology used to set the original particulate matter significance level promulgated on August 7, 1980 (45 FR 52676). Basically, this approach used an emission rate for which the modeled ambient concentration represented approximately 4 percent of the 24-hour primary standard. The Administrator also announced in the proposal that two additional points needed to be considered during the final selection process for the PM₁₀ significant emission rate.

First, the proposed value of 15 tpy assumed that the 24-hour primary standard for PM₁₀ would be set at 150 µg/m³. Second, EPA was in the process of studying the potential effects of alternative significance levels in terms of their environmental benefits versus administrative burden. The study was completed after the publication of the proposal notice, but was placed in the rulemaking docket approximately 30 days later for public inspection. The Administrator stated his intention to take into consideration the results of the study and all relevant comments pertaining to it.

Seven commenters expressed opposition to the proposed 15 tpy significant emission rate for PM₁₀, while three commenters conditionally supported it. Of those in opposition, five commenters sought a higher emission rate and two expressed their concern that proposing any significance level at this time is premature.

Two of the opposing commenters were particularly concerned about the effect of a 15-tpy significant emission rate on surface mining activities. One stated that while it did not object to establishing a significance level for PM₁₀, use of the proposed 15 tpy rate would be completely inappropriate for determining major modifications at surface mines if such facilities are made subject to the PSD program. This commenter noted that even a minor extension of a haul road at a large surface mine could increase emissions more than 15 tpy. The commenter argued that such activity should not be considered a major modification which would subject an existing coal mine to PSD review.

The EPA does not believe that special consideration of the effects on surface mining activities or any other specific category of source should generally serve as the basis for selecting the significant emission rate for PM₁₀ emissions. The significance values provide a categorical exemption from

the PSD preconstruction review requirements based on the de minimis nature of the prescribed emission rate with respect to its potential contribution to the 24-hour primary NAAQS, regardless of the specific emitter of the pollutant.

In addition, the Administrator found that the commenter's position indicating that many surface mines would be adversely affected by a 15 tpy PM₁₀ threshold in particular is not totally correct. Minor extensions of haul roads, as are typically made during the course of carrying out the mining operation, would not generally be considered modifications for PSD purposes as long as such activity would already be allowed under the permit granted to the source. Even if this were not the case, the extension of a haul road could easily result in emissions which would exceed any of the emission rates that EPA considered for developing a PM₁₀ threshold.

At the present time, however, the fugitive emissions from surface coal mines are generally not included in the determination of whether such source is major for the purposes of PSD [see e.g., 52.21(i)(4)(vii)] and consequently the 15 tpy significance threshold would generally not apply to their PM₁₀ emissions. The EPA is considering, under separate rulemaking, whether it is appropriate to extend the requirements for inclusion of fugitive emissions to surface coal mines (45 FR 43215, October 26, 1984). The EPA believes that the commenter's concerns would be more appropriately addressed under that rulemaking action.

Several of the commenters stated that EPA should set the significant emission rate for PM₁₀ at a level higher than 15 tpy and gave a variety of reasons for this conclusion. First, two of the commenters said that the 24-hour standard can be significantly higher than 150 µg/m³, i.e., 250 µg/m³, and still protect public health with an adequate margin of safety. This comment has more to do with the level selected for the 24-hour NAAQS than with the significant emission rate for PM₁₀. Having promulgated a 24-hour standard of 150 µg/m³, the Administrator finds no specific argument from the commenters that the proposed significance threshold should not be 15 tpy.

Second, a commenter claimed that the proposed significance value was based on very conservative modeling. Thus, the commenter reasoned that the significance rate could be raised without causing any significant real-world impacts on air quality. The Administrator wishes to point out that the techniques used to derive the

selected value followed EPA guidance, using procedures and assumptions common to air quality impact analyses. Such techniques could be used by sources as well to calculate their own ambient impact. The commenter provided no demonstrations to support the allegation that the modeling techniques which EPA used were not appropriate for selecting the PM₁₀ significant emission rate.

Third, a commenter used EPA's study of alternative significance levels to conclude that EPA had no justification for selecting a significant emission rate for PM₁₀ below 20 tpy. The commenter's conclusion was based on a study finding that, regardless of the PM₁₀ significance level considered, up to 25 tpy, approximately 90 percent of all PM₁₀ emission increases would be subject to PSD review. The commenter stated that "thousands of dollars" in annual costs to prepare and review applications with respect to PM₁₀ would be saved by using a significance level of 20 tpy rather than 15 tpy. The Administrator acknowledges that, according to the study, the additional PM₁₀ reviews required under a 15 tpy significance level would not add appreciably to total PM₁₀ emissions brought under PSD review. The Administrator, however, is unable to conclude that the additional number of reviews estimated to result from selection of a 15 tpy significance level would cause an administrative burden worthy of consideration for special relief. The court in *Alabama Power* stated that EPA's authority to exempt sources from PSD review "is narrow in reach and tightly bounded by the need to show that the situation is genuinely de minimis or one of administrative necessity" [Alabama Power Company v. Costle, 636 F.2d 323, 361 (D.C. Cir. 1979)]. In keeping with the previous approach for setting de minimis cutoffs, a source capable of consuming almost 5 percent of the primary 24-hour NAAQS is not insignificant, and EPA did not find a compelling need for an exemption by reason of administrative necessity.

One commenter, in an apparent misunderstanding of EPA's approach for selecting a significant emission rate, disagreed with "EPA's modeled calculations of 25 tpy of TSP and 15 tpy of PM₁₀ to define 'significant' emissions." This commenter stated that the emission rate for TSP and PM₁₀ "should both be the same for most efficient combustion sources." The commenter's finding that an efficiently operated combustion source would have TSP emissions comprised almost entirely of PM₁₀ size particles has no bearing on the process of selecting a significant emission rate

for PM₁₀ which may differ from the rate for TSP. The significant emission rates for PM₁₀ and TSP are based on the relationship of a selected amount of emissions to the resulting modeled ambient concentrations from such level of emissions. These ambient concentrations are then compared to the appropriate primary 24-hour NAAQS to determine whether the emission rate is significant.

Of the three commenters who conditionally supported the proposed significance level, two stated that, if EPA sets the primary PM₁₀ standard higher than 150 µg/m³, EPA should raise the significance level by a proportionate amount. The third supportive commenter agreed with the 15 tpy emission rate as long as EPA did not eliminate the 25 tpy significance level for TSP. If EPA were to abandon the TSP standards altogether, the commenter suggested that EPA should reevaluate the 15 tpy level in order to provide continued and equivalent ambient air quality protection. As with previous commenters, the Administrator finds no argument here concerning the 15 tpy significance level based on the fact that: (1) He is today promulgating a 24-hour PM₁₀ NAAQS of 150 µg/m³ in an accompanying final notice in today's *Federal Register*, and (2) the existing significance level for TSP is being retained.

Finally, the two commenters who felt that the proposal of a significant emission rate for PM₁₀ was premature claimed that the technology for accurately predicting PM₁₀ emissions from a source does not yet exist. One stated in particular that if EPA cannot promulgate a reference method as part of the implementation package, then sources should be allowed to use the existing significance level of 25 tpy in making applicability determinations with the existing reference method for particulate matter emissions. The EPA acknowledges that a reference method for PM₁₀ source testing does not yet exist. Nevertheless, the Agency has developed and used PM₁₀ source test protocols to collect data from a number of source categories to develop PM₁₀ emission factors. The EPA believes that this data is of good quality and can be used to determine potential PM₁₀ emissions to be compared against the new PM₁₀ significant emission rate. The EPA will continue to develop and update PM₁₀ emission factors as additional test data become available. The EPA believes that sufficient information is already available to estimate the level of PM₁₀ emissions from many sources that will come under

PSD/NSR. However, when it is not feasible to estimate the amount of PM₁₀ emissions from a particular source, then it would be appropriate to proceed only on the basis of particulate matter emissions (TSP).

c. Prevention of Significant Deterioration Geographic Applicability. Because of the uncertainty as to whether section 110 or Part D would apply to the revisions being proposed, the Administrator described various alternatives as to how the PSD requirements with respect to particulate matter would apply based on the geographic location of the proposed source. In turn, commenters based their responses on certain assumptions and opinions as to which legal pathway would apply. In light of the fact that the Administrator has concluded that only section 110 should be used to implement both the primary and secondary NAAQS, this section will address only those portions of the proposal which pertained to that particular set of alternatives. The issue of whether or not commenters agreed with the Administrator's selection of the section 110 implementation approach was addressed in an earlier part of this preamble.

Under the section 110 pathway for implementing the proposed PM₁₀ primary NAAQS, EPA anticipated that PM₁₀ preconstruction review would be covered under the PSD requirements in all locations. The proposal explained that this result would occur because States would not be required to designate PM₁₀ nonattainment areas pursuant to section 107 of the Act. In the absence of PM₁₀ area designations, PSD would apply to PM₁₀ sources in any area designated as attainment or unclassifiable pursuant to section 107 for any pollutant unless the area was nonattainment for all pollutants having section 107 designations.²² There are, at

this time, no such pervasive nonattainment situations to be found in the nation.

The proposal also discussed the possibility that the Administrator would make the secondary NAAQS equivalent to the primary NAAQS in all respects, including particle size. If this were to occur, the proposal noted that under a section 110 implementation pathway for the secondary NAAQS, geographic applicability would be the same as the program outlined for the PM₁₀ primary NAAQS.

Some commenters disagreed with EPA's assertion that a section 110 implementation approach precludes the use of section 107 area designations with respect to the revised NAAQS for particulate matter. These commenters, while divided over which indicator to use with the term "particulate matter," claimed that there is no authority in section 107 for States to completely remove the area designations for particulate matter. Moreover, the commenters disagreed with EPA's conclusion that the term "national ambient air quality standards" in section 107(d)(1) must mean only the NAAQS in effect in 1977 even if that is the accepted meaning of the same phrase in section 171(2).

The Administrator interprets section 107(d)(1) of the Act to require States to list those air quality control regions which, "on the date of enactment of the Clean Air Act Amendments of 1977," do or do not comply with the NAAQS in existence on that date. In turn, the Administrator believes that section 107(d)(5) provides for States to revise the original list from time to time to reflect changes in air quality relative to those NAAQS in existence in 1977. If Congress meant for the section 107(d)(5) revision process to include new section 107 area designations for new NAAQS, or for revised NAAQS which would create significant new planning burdens, then it would follow that Congress also intended for Part D requirements to apply in areas newly designated as nonattainment for such pollutants after the December 31, 1982, statutory deadline for demonstrating attainment—even though the affected area had no opportunity to complete newly imposed planning burdens and to demonstrate attainment within the statutory timeframe. The Administrator does not believe that Congress intended this outcome. Similarly, it would make no sense to continue to maintain a list indicating ongoing compliance status relative to a level or form of the standard that no longer exists.

²² If a proposed source or modification qualifies as major, its existing or prospective location must be in a PSD area in order for a PSD review to apply. A PSD area is one designated as attainment or unclassifiable under section 107 for any pollutant for which a NAAQS exists, regardless of what pollutant emissions cause the source to be major. In general, once it is determined that a proposed major source or major modification would occur in a PSD area, the PSD review applies to significant emissions increases of each regulated air pollutant unless the area is designated nonattainment under section 107 for that pollutant. In the case of a pollutant not subject to the section 107 area designation process (e.g., lead, PM₁₀), PSD would not apply only when the area is designated nonattainment for all pollutants subject to section 107.

The Administrator has concluded, therefore, that the use of a section 110 implementation pathway—applying to a new NAAQS or revised NAAQS involving significant new planning burdens—does preclude the use of section 107 area designations. The term "national ambient air quality standards" in section 107 was intended by Congress to mean only the NAAQS in effect in 1977, or revisions to such NAAQS which would not impose any significant new planning burdens and would therefore continue to be subject to Part D of the Act. The section 107 area designations for TSP are being retained for the interim, however, in order to support the continued applicability of the section 163 increments for "particulate matter," which the Administrator believes Congress intended to be TSP-based increments. As explained earlier in this preamble, these TSP designations will continue to apply until EPA completes rulemaking to establish PM₁₀ increments and such increments become effective in accordance with section 166 of the Act.

One of the commenters who supported continuation of the section 107 area designations for particulate matter, citing *Alabama Power* at 361-363, alleged that the areas originally identified as unclassifiable or attainment under section 107(d)(9) (D) and (E), respectively, remain PSD areas subject to section 163 increments regardless of any future change in their section 107(d) area designation status. The Administrator does not find anything within the *Alabama Power* decision to support the commenter's conclusion. Section 107(d)(5) provides States with the authority to "from time to time review, and as appropriate revise and resubmit" the area designations as originally promulgated by the Administrator. If geographic applicability for PSD (and nonattainment NSR) was to be permanently affixed to the original area designations, then there would be little reason to revise the designations. The EPA policy to date has always allowed States to revise their section 107 area designations as appropriate and to base PSD/NSR geographic applicability on the most current designations. In the case of PM₁₀, however, the Administrator has already stated his position that the section 107 area designation process does not apply, and the existing designations for particulate matter apply only with respect to TSP.

Several commenters stated that although they agreed that PSD may apply everywhere for PM₁₀ as the primary standard, EPA's approach of using TSP for the secondary standard

could prevent the desired "PSD everywhere" approach because a section 107 nonattainment designation for TSP would prevent any PSD review for particulate matter in those nonattainment areas. One commenter in particular stated that EPA's proposal glosses over this difficulty, and EPA could not achieve the result it wants without also changing its position that the PM₁₀ standards are revisions of the existing particulate matter NAAQS rather than new NAAQS.

Even though EPA decided not to retain the TSP indicator for the secondary NAAQS, the commenters' main concern focused on the alleged problems that would result from EPA's retention of the section 107 area designations for TSP. For the reasons already given, the Administrator does not agree that the section 107 area designation process applies to the PM₁₀ NAAQS and thus a section 107 nonattainment designation for TSP would not prevent PSD review for the PM₁₀ indicator. Instead, a nonattainment designation for particulate matter will only affect which preconstruction review requirements will apply with respect to the TSP indicator. In addition, the Administrator does not believe that it is necessary to consider the PM₁₀ NAAQS as new NAAQS—rather than revisions to the existing standards—to independently address PM₁₀ as a form of particulate matter. The Administrator believes instead, that it is possible to regulate two forms of the pollutant particulate matter through the establishment of different indicators and regard each as being a separate pollutant regulated under the Act. Thus, by establishing a new PM₁₀ indicator for the particulate NAAQS and retaining the existing TSP indicator for the section 163 increments as an interim measure, it is possible to have two regulated forms of particulate matter. In turn, it is appropriate to determine PSD applicability independently for each regulated form.

Some commenters were concerned that an EPA interpretation requiring no section 107 area designations for PM₁₀ under a section 110 implementation pathway would pose a significant hurdle to EPA's acceptance of the legal argument that section 110 should govern all PM₁₀ SIP revisions. As described earlier in the preamble, EPA's position concerning the applicability of section 110 or Part D is based on whether a NAAQS revision would impose significant new planning burdens. The ultimate applicability of section 107 area designations was not a factor in arriving at this conclusion.

d. *Best Available Control Technology (BACT)*. In the proposal, EPA stated that its proposed action to regulate PM₁₀ was not expected to immediately cause significant changes in the way that BACT determinations would be made for particulate matter. This statement was based on the belief that current control technology for particulate matter appears to be effective for controlling both PM₁₀ and TSP. Meanwhile EPA further indicated that it would be in the process of evaluating the effectiveness of various existing NSPS for controlling PM₁₀ and, at a later date, would make any necessary adjustments in BACT policy.

In order to begin implementing the BACT requirement for PM₁₀, the Administrator proposed that as a matter of policy he would accept emission limitations in terms of either PM₁₀ emissions or particulate matter emissions provided the selected emission limit is enforceable and represents selection of the appropriate control technology for meeting BACT for PM₁₀. The proposal explained that the alternative of a particulate matter emission limit rather than a PM₁₀ emission limit to represent BACT for PM₁₀ might often be more desirable initially for several reasons, including: (1) The continuing reliance on TSP-based SIP's until a comprehensive PM₁₀ SIP could be developed, (2) the present lack of a standard reference method to ensure source compliance with a PM₁₀ emission limitation, and (3) the fact that the NSPS were not likely to directly reflect PM₁₀ emissions for some time. Commenters generally supported EPA's proposed policy that, as an alternative to expressing the BACT emission limitations in the PSD permit in terms of PM₁₀ emissions, the permitting authority may instead express the emission limitations in terms of particulate matter emissions.

Several commenters urged, however, that such policy should be strictly interim and that emission limitations should begin to be expressed in terms of PM₁₀ emissions as soon as possible pending the development of a reference method for measuring PM₁₀ emissions.

Sharing a similar concern, two other commenters indicated that the proposed BACT policy for PM₁₀ should be tightened with respect to allowing the use of particulate matter emission limitations. One commenter pointed out that while EPA's proposal for BACT determinations appears to be the same as its guidance on lowest achievable emission rate (LAER), they considered the BACT proposal to be far less protective. This conclusion was based

on the fact that EPA's LAER proposal would allow substitution of particulate matter emission controls for PM₁₀ emission controls only when the latter are unavailable or completely unreliable, while the BACT proposal would allow similar substitutions at any time, whether they are necessary or not.

The other commenter cautioned that EPA should permit particulate matter emission substitution only when PM₁₀ emission limitations are not feasible, or when the applicant undertakes the responsibility for demonstrating the continued effectiveness of the particulate matter emission limit for controlling PM₁₀ emissions. This commenter explained that even slight variations in assumed operating conditions could affect the PM₁₀/TSP relationship tremendously. Under worst case parameters, the commenter claimed, a source could emit several times more PM₁₀ emissions than anticipated while the particulate matter emission rate remained constant.

The Administrator agrees that, when PM₁₀ emissions would occur in significant amounts, BACT defined in terms of PM₁₀ emissions should be encouraged whenever possible. While the proposed policy was intended as an interim approach, the way that it was expressed would have allowed for the continued use of particulate matter emission limitations beyond the point that they were of necessity. Therefore, as described in IV.D. PSD/NSR Program, the Administrator has reformulated his BACT policy to promote the use of PM₁₀ emission limits in most cases contingent on the availability of emission factors and control efficiency information for the source under review. When it is not feasible to quantify PM₁₀ emissions, EPA will allow the use of emission limits based on particulate matter emissions as a substitute.

Objecting to the proposed BACT policy, one commenter said that it would be arbitrary for EPA to require sources subject to BACT for PM₁₀ to meet a TSP emission limit. The commenter was concerned that a source may not need additional controls to meet a PM₁₀ emission limitation, yet could be found in violation because it exceeds the particulate matter emission limit. The proposed policy was not an attempt to require a source subject to BACT for PM₁₀ to meet a particulate matter emission limit. Instead, it was presumed that there would be a desirability or need to do so during the period when source test methods, SIP's, and NSPS were under development with respect to PM₁₀. The fact that the Administrator has revised his policy concerning the

use of TSP substitutions should alleviate some of the commenter's objections. However, when it should become necessary to define a source's emission limitations in terms of particulate matter emissions, source compliance must be based on the source's ability to continuously meet that particulate matter emission limit.

Finally, a commenter disagreed with EPA's statement on the overall effectiveness of current particulate matter technology for controlling both PM₁₀ emissions and particulate matter emissions. The commenter argued that, from his experience, significant changes are required when handling high percentages of PM₁₀ particles. The commenter expressed doubt that a system handling particulate matter emissions successfully will also handle PM₁₀ emissions to the same degree.

The Administrator appreciates the point being made by this commenter and acknowledges that one should not arbitrarily assume that a particular control device or operating system will work equally well for both particulate matter emissions and PM₁₀ emissions. While the Administrator continues to believe that current particulate matter control technology has the effect of controlling both forms of particulate matter, he emphasizes that the reviewing agencies have the responsibility to evaluate each BACT situation carefully to determine which particular emission reduction system is most appropriate for the source configuration under review.

e. National Ambient Air Quality Standards Analysis. Section 165(a)(3) of the Act provides that no PSD source can be approved for construction if it would cause or contribute to ambient concentrations of a pollutant that would exceed the applicable NAAQS.²³ The Administrator proposed that, at a minimum, he would require that PSD sources subject to the Part 52 PSD regulations and found to cause or contribute to a PM₁₀ NAAQS violation obtain sufficient PM₁₀ emission reductions (offsets) to provide a net air quality benefit in the affected area. Such offsets would be considered to satisfy the "cause or contribute to" language under section 165(a)(3) of the Act (see

footnote 14 and accompanying text). In addition, the Administrator indicated that he was considering whether it might be necessary to impose additional conditions beyond offsets to adequately address nonattainment situations involving PM₁₀. He solicited comments as to what additional requirements should be considered.

The commenters generally stated that EPA can implement, without any changes to its PSD rules, the requirement that in areas where the PM₁₀ NAAQS would be exceeded a proposed source can make a showing that it will not cause or contribute to a NAAQS violation by offsetting its projected emissions. In fact, some commenters said that EPA has no authority to require that PSD programs include LAER and statewide compliance requirements. The commenters claimed that the States have a responsibility to submit a SIP which provides for attainment as required by section 110(a)(2)(A). Only if a State fails to satisfy this requirement does EPA have any authority to impose additional requirements.

The EPA generally agrees with these commenters. In their initial PM₁₀ SIP's, States will not be required by EPA to impose LAER and statewide compliance provisions but need only require that proposed sources and modifications demonstrate that their emissions will not cause or contribute to ambient concentrations in excess of the PM₁₀ NAAQS. In the event initial PM₁₀ SIP's fail to provide for timely attainment and maintenance of the PM₁₀ NAAQS, EPA will then investigate the need to impose additional requirements on proposed new sources.

Several commenters suggested that, since PSD offsets will become more common under a section 110 pathway, some creditability criteria might be helpful in managing offsets under the PSD program. The Administrator agrees; he believes that creditability criteria are not only helpful but are necessary to determine the adequacy of emission offsets obtained by PSD sources. In the proposal, the Administrator indicated that he would approve a State's emission offset program under section 51.18(k) [recodified at 51.165(b)] only if creditability criteria at least as stringent as the criteria set forth under section 51.18(j) [recodified at 51.165(a)] are required to be applied to all offsets. These criteria should also be applied to offsets obtained by a source under a State PSD program (see footnote 15 and related discussion).

Where EPA is implementing the PSD program under its Part 52 PSD

²³ As explained earlier in the preamble, the Administrator's determination that section 110 governs the PM₁₀ implementation requirements means that the PSD program for PM₁₀ will apply in all locations regardless of how the existing air quality compares with the PM₁₀ NAAQS. Consequently, the PSD NAAQS analysis and all other applicable PSD requirements will serve to determine the approvability of a new or modified PM₁₀ source seeking to construct in an area where PM₁₀ NAAQS violations may already exist.

regulations and the applicant must obtain emission offsets with respect to a pollutant subject to PSD review, the Agency's general policy is not to be involved directly in approving emission offsets which would involve the modification of permits issued by State permitting authorities. Instead, EPA will require the owner or operator of the proposed source to obtain offsets (whether from another facility on the same premises or from an external source) through the appropriate State or local new source review program before EPA can approve the proposed source under PSD. These offsets must meet EPA-approved creditability criteria which are equivalent to the criteria under section 51.165(a) and contained in the applicable SIP.

One commenter objected to the Administrator's proposal to require a source that would cause or contribute to a PM₁₀ NAAQS violation to obtain sufficient offset so as to provide a "net air quality benefit" in the affected area. The commenter argued that this requirement is unlawful, and that a source whose emissions have been offset one-for-one cannot be said to "cause or contribute" to a NAAQS violation.

As explained in footnote 14, EPA has decided to restrict the use of the "net air quality benefit" test in conjunction with the offsets which EPA requires for purposes of PSD and section 51.165(b). Offsets producing air quality benefits would only be required in areas already experiencing violations of the PM₁₀ standard where the State does not have an approved attainment demonstration. The EPA does not agree with the commenter's conclusion that one-for-one offsets will always satisfy the "cause or contribute to" criterion with respect to NAAQS violations. Where an area is shown to have existing violations and does not have an adequate attainment plan, new sources that fail to provide progress would continue to "contribute" to the nonattainment problem inasmuch as the area has not yet provided for expeditious attainment through reductions from existing sources.

In an area that does not have existing violations, a new source would need only to compensate for its own adverse ambient impacts to fully remedy any projected violations. Where an area is experiencing violations but does have an adequate attainment plan, new sources again need only compensate for their own ambient impacts since the area is already moving toward attainment as expeditiously as is practicable. As pointed out in the preamble to the recently published final

Emissions Trading Policy Statement, since EPA can do no more than require States to demonstrate timely attainment, EPA will approve trades, including offsets, in areas experiencing violations that have adequate attainment demonstrations so long as air quality impacts are equivalent [see 51 FR 43814, 43818 (December 4, 1985)]. States are of course free to require additional offsets in such areas. However, the Emissions Trading Policy Statement requires substantial additional air quality progress for trades in areas without adequate attainment demonstrations to insure that such trades will help move the areas forward toward eventual attainment [see 51 FR 43814, 43820]. Further, even in areas that are not experiencing violations, offsets may need to exceed one-for-one in terms of emissions in order to produce equivalent ambient impacts, depending upon source parameters and geographic conditions.

Finally, several commenters stated that, if a new facility fully offsets its emissions, EPA should waive the PSD requirements for ambient monitoring and modeling. The Administrator does not find any justification for a blanket waiver from the PSD monitoring and modeling requirements simply because a prospective source would obtain emission reductions which fully offset its emissions. The commenters have failed to consider the importance of modeling and monitoring (conceivably both preapplication and post construction monitoring) in demonstrating that the emission offsets would satisfy the air quality impact test associated with the required emission offsets and described above in the response to the previous comment; in fact, such a demonstration would of necessity require modeling. Consequently, the Administrator finds no reason to change EPA's present requirements for PSD monitoring and modeling as a result of today's action to promulgate PM₁₀ amendments.

f. Prevention of Significant Deterioration Increments for Particulate Matter. In the 1985 proposal, the Administrator indicated his belief that the PSD program would need to include a dual increment system for particulate matter; that is, separate sets of increments for TSP and PM₁₀. To carry this out, the Administrator proposed to: (1) Clarify that the existing increments, defined under section 163 of the Act, would be measured as TSP; and (2) establish new increments measured as PM₁₀ in accordance with the procedures under section 166 of the Act. While he believed that this proposal could be

readily accomplished under the proposal to promulgate a PM₁₀ primary NAAQS implemented under a section 110 pathway and a TSP secondary NAAQS implemented under a Part D pathway, the Administrator raised a number of questions as to how the increment system for particulate matter would be affected by other alternatives for revising the particulate matter NAAQS.

Relevant to today's announced action, the Administrator raised the issue regarding the continued applicability of the existing increments for particulate matter in the event that the secondary NAAQS was defined as a PM₁₀-based standard and implemented via section 110 of the Act as is the case in today's final action. Specifically, the Administrator indicated that it was not clear whether TSP would continue to be regulated under the Act, whether the section 107 designation process would continue to apply to particulate matter, or whether the TSP-based increments would continue to apply. Thus, the Administrator requested comments concerning all possible impacts on the PSD increments for particulate matter if he were to use PM₁₀ to define both the primary and secondary NAAQS.

With respect to PM₁₀ increments, the Administrator indicated that he would consider using the approach applied by Congress, which initially created the TSP increments, to establish new PM₁₀ increments (i.e., basing them on specific percentages of the NAAQS). In addition, he described possible means of implementing such increments relying on many of the same criteria that are currently being used to implement the existing increments for particulate matter. This particular discussion was raised to identify issues associated with the eventual development of a PM₁₀ increment system which would proceed under a subsequent rulemaking action in accordance with section 166 of the Act.

The EPA received numerous comments concerning the PSD increments for particulate matter. The Administrator's announced intention to establish a dual increment system was opposed by most of the commenters. Many of these commenters also opposed the retention of TSP as the indicator for measuring the increments. In addition to the comments concerning the appropriate way to express the increments, a number of commenters presented arguments concerning the selection of the proper implementation pathway (section 110 versus Part D) in relation to the continued applicability of the increments for particulate matter.

Several commenters pointed to the PSD provisions of the Act and the

legislative history to argue against the Administrator's proposal to define the section 163 increments for "particulate matter" as TSP increments. The commenters pointed out that section 163 establishes increments, at levels that cannot change, for "particulate matter" in whatever way EPA wishes to define it. Congress, the commenters noted, intended section 166 to be used to set "numerical measures" for totally different pollutants and not for various indicators of the same pollutant, e.g., particulate matter. These commenters stated that there is no requirement on the face of the Act, or in the legislative history of section 163, to suggest that Congress intended to require EPA to define the increments for particulate matter in terms of TSP. The commenters cited the use by Congress of the term "particulate matter" without any reference to TSP. One commenter in particular stated that, although at the time Congress adopted section 163 of the Act in 1977 particulate matter was generally equated with TSP and Congress did use TSP as the basis for setting the section 163 increments, it does not necessarily follow that Congress intended the increments forever to be tied to TSP if EPA changed the indicator for purposes of the NAAQS.

On the other hand, one commenter supported retention of the existing statutory increments as TSP increments based on the very fact that Congress was aware of the use by EPA of TSP as the indicator for particulate matter. Therefore, the commenter believed that Congress intended the term "particulate matter" to mean TSP. This commenter also claimed that there is no authority in the Act for EPA to administratively change this clear example of legislative policy judgment. Referencing the legislative history, this commenter went on to say that by choosing increments that were numerically a small fraction of the then current NAAQS, Congress was clearly hoping to minimize the amount of environmental damage associated with the congressional objective to accommodate a specified level of new economic activity. Thus, the commenter concluded, if the statutory increments were modified to "track" a NAAQS revision, both the absolute amount of additional pollution allowed in each area and the number of additional polluting sources permitted would be changed. The commenter stated that since the latter was the subject of intense congressional scrutiny, there is a strong presumption that Congress did not intend to give the Administrator discretion to change the statutory

increments in section 163 because of a particulate matter NAAQS revision. According to this commenter, EPA has authority under section 166 to establish a PSD program for a particulate matter indicator other than TSP, but as a supplement to, not a replacement for, the section 163 increment program.

The Administrator agrees with the latter commenter that Congress did intend to fix the measure of the particulate matter increment defined in section 163 in terms of TSP and to provide for establishment of new increments in the appropriate form under section 166 of the Act for any new NAAQS. In defining the section 163 increments for particulate matter, Congress used the same term that EPA used in establishing the then current NAAQS, clearly understood to apply to TSP. Further, Congress relied upon TSP-based emissions data from a number of specific source categories to agree upon specific allowable increases that would accommodate a certain level of source growth.²⁴ This point is important because it assigns to the "particulate matter" increments a fixed reference point, i.e., the TSP indicator, upon which source growth is to be measured. To change this reference point, as the latter commenter notes, would change a significant part of the nondegradation system which Congress chose to define in section 163 by means of specific maximum allowable increases for both TSP and SO₂. The Administrator wishes to note here that while he strongly believes that the statutory increments for "particulate matter" must be measured in terms of TSP, he does not believe that he should necessarily continue to retain TSP increments beyond the date when new PM₁₀ increments become effective. This will be discussed more fully in response to subsequent comments which support the dual increment system which the Administrator originally proposed.

Finally, Congress apparently considered excluding "naturally

occurring particulate matter" from subsection 163(c) and rejected that alternative.²⁵ Thus particulate matter increments must include all suspended particles for Congress to consider it necessary to exclude some fraction of those particles.

Several commenters stated that it was clear that the court in *Alabama Power* acknowledged EPA's power to define "particulate matter," both for NAAQS and PSD increment purposes as something other than TSP. The commenters quoted from footnote 134 of that opinion:

EPA has discretion to define the pollutant "particulate matter" to exclude particulates of a size or composition determined not to present substantial public health or welfare concerns. 636 F. 2d at 370 n. 134.

The Administrator acknowledges that, in dicta, the court in *Alabama Power* describes such an approach, which could be used to ultimately redefine the statutory increments for particulate matter as PM₁₀ increments. However, the court clearly premised this approach on a finding by EPA that larger particles present no substantial health or welfare effects. The EPA has not reached this conclusion. Rather, EPA believes that large particles do present some welfare concerns but that controls necessary to meet a PM₁₀ NAAQS will adequately address any such concerns. Further, EPA does not read footnote 134 to mean that EPA could administratively redefine the statutory increments to apply to PM₁₀. Such a reading would be inconsistent with the court's stated rationale. Moreover, the court's statements appear in a footnote not essential to the ultimate disposition of the case, and are thus not entitled to the weight of a judicial holding.

The court's conclusion that once EPA excludes certain particles from the NAAQS for particulate matter then PSD increments for TSP should not apply to such excluded particles is sound. However, it does not follow that EPA can administratively alter the statutory TSP increments. The court did not analyze the issue of which indicator Congress intended to use for the statutory increments prior to drafting the footnote. After a careful review of the relevant statutory and legislative background, as discussed above, EPA has concluded that Congress intended

²⁴ Committee on Environment and Public Works, 95th Cong., 2nd Sess., A Legislative History of the Clean Air Act Amendments of 1977, at 330-331 (1978). Discussion recorded in the House debate on the selection of PSD increments indicates that acceptance of the increments then under consideration was based heavily on the assurance that power plants using BACT could normally be built up to approximately 6,000 megawatts in Class II areas, and that constraints in the construction of other types of new plants would be in the equivalent range. If for some reason the section 163 increments were to be redefined in such a way that they would become more stringent, then it is not at all clear that Congress would have selected such levels. It cannot be concluded, therefore, that redefining the existing increments to make them less stringent would have been any more acceptable to Congress.

²⁵ The 1977 House bill had an exclusion for naturally occurring particulate matter in the forerunner of subsection 163(c) [see HR Rep. No. 95-294, 95th Cong., 1st Sess. 165 (1977)]. The conference committee remanded the exclusion and it was not included in subsection 163(c) as adopted. However, the term particulate matter was used unchanged in both versions of the provision.

the statutory increments to be measured as TSP. The EPA therefore agrees with the commenter who claimed that footnote 134 does not change the statutory construction. This commenter further pointed out that footnote 134's sole authority is section 166, but that section contains no authority to modify the section 163 increments; rather section 166 establishes a duty for EPA to expand the PSD program beyond the statutory increments of section 163.

The Administrator agrees that the proper approach for developing new PM_{10} increments is found in section 166 of the Act, and earlier in this preamble indicated his intention to proceed along that prescribed path. Further explanation of his effort and its effect on the PSD increment system for particulate matter is provided in response to subsequent comments below.

Some commenters gave other reasons for opposing the retention of TSP as the indicator for the particulate matter increments. A number of these commenters stated that retention of TSP would lead to complex, duplicative, and therefore wasteful practices in that it would require sources subject to the PSD program to implement dual systems for monitoring, establishing emission limitations and control strategies, obtaining offsets, and preparing and evaluating permits—one for the size-specific indicator of the revised NAAQS and another for TSP as the indicator for the PSD increments.

The Administrator acknowledges that, during the interim period when the section 163 TSP increments are to be retained, the PSD program will entail review requirements for both TSP and PM_{10} . Such requirements would cause permitting agencies and PSD sources to consider both forms of particulate matter when such sources could emit both TSP and PM_{10} in significant amounts. This situation is intended to be temporary, however, and should improve when EPA completes the statutory process for developing PM_{10} increments in accordance with section 166. The EPA believes such a situation is necessary during the period required to establish PM_{10} increments. The alternative, that is, temporarily eliminating increment protection for particulate matter, cannot reasonably be justified.

A number of commenters associated with the mining industry expressed their concern that if EPA finalizes its October 1984 proposal to list surface coal mines as major sources for which fugitive emissions are to be included in determining PSD applicability, retention of the TSP increments would result in

severe economic consequences for surface coal mines. These commenters noted that the adoption of a size-specific indicator for the increments, instead of TSP, would reduce the adverse economic effects although there would still be substantial limits on mine production.

The Administrator recognizes that certain industries may be affected more than others under the requirements of the PSD program; however, this situation cannot serve as the basis for defining the form of particulate matter used to measure the increments for particulate matter in section 163 of the Act. The Administrator has already explained the legal basis by which he concluded that the statutory increments for particulate matter must be measured by the TSP indicator. Eventually, the Administrator intends to promulgate PM_{10} increments which States may use effectively to replace the statutory TSP increments.

Some commenters supported EPA's retention of the TSP-based increments and even suggested that PM_{10} increments should be added to supplement rather than replace the statutory increments. Several air pollution control agencies stated that EPA should retain the TSP increments to prevent deterioration beyond what would be allowed under the TSP increment system and to prevent potential soiling and nuisance impacts of particles greater than 10 microns. A Federal agency noted that the development of PM_{10} increments would be a significant additional management tool. Another control agency claimed that abolishment of the TSP secondary NAAQS (and presumably the TSP increments) would weaken the PSD program because PSD applicability would be based on a source's potential to emit PM_{10} , which may be only a fraction of TSP, i.e., particulate matter emissions.

While the Administrator agrees that the statutory increments for particulate matter are appropriately expressed as TSP increments, he does not agree that it is necessary or reasonable to continue measuring air quality deterioration in terms of TSP in light of the fact that both the primary and secondary NAAQS for particulate matter will be measured by a PM_{10} indicator, particularly when PM_{10} increments are developed in accordance with section 166. In fact, once EPA approves State requests to delete section 107 designations for TSP, the Class II TSP increments will no longer have any applicability since Class II increments by definition apply only in designated section 107 areas. The statutory Class I TSP increments will of

course remain applicable. However, EPA intends to develop PM_{10} increments under section 166 which are equivalent to the existing TSP increments. To the extent this can be done, protection of the PM_{10} increments will fully protect the TSP increments. The EPA will then accept a demonstration of protection of the PM_{10} increments as a surrogate for the required demonstration of protection of the TSP increments so that permit applicants and reviewers will be able to avoid the then unnecessary burdens and complexities of a dual increment system. The EPA believes it has the authority to do this under section 301(a) of the Act.

With respect to any weakening of the PSD program as a result of basing major source status on PM_{10} emissions rather than particulate matter emissions, the Administrator recognizes that eliminating regulation of TSP altogether could reduce the number of sources emitting major amounts of "particulate matter" and consequently would allow such sources to avoid PSD review. As part of the EPA's effort to develop a PM_{10} increment system, the Administrator intends to evaluate the effects on PSD source applicability of changing the indicator for particulate matter. Should a significant negative effect be foreseen, the Administrator would consider alternatives for correcting the problem such as redefining "major" for PM_{10} sources under section 166.

One commenter, who supported redefining the section 163 increments as PM_{10} increments, also stated that EPA's concern about the geographic applicability of the section 163 increments for particulate matter was unfounded. This commenter noted that Congress designated mandatory Class I areas and then designated all other areas as Class II if the area was attainment or unclassifiable for at least one pollutant. The commenter then concluded that because the Class II area classifications are not pollutant specific—as opposed to the section 107(d) designations which are—the area classifications will survive the NAAQS revision and subsequent deletion of section 107 area designations for TSP, and the section 163 Class II increments for particulate matter will retain their applicability as well.

The EPA disagrees with the comments claiming that the Class II area classifications are not pollutant specific. If that interpretation is correct, then it would follow that Congress intended the PSD review including the increment analysis to apply to emissions of a nonattainment pollutant (based on a section 107 designation) simply because

the area was also designated attainment for another pollutant. The structure of the Act suggests otherwise, indicating instead that Congress did not intend for a source to undergo PSD review for a pollutant that was subject to a section 107 nonattainment designation. The EPA believes that by adding Part D to the Act in 1977, Congress intended that separate preconstruction review requirements set forth under section 173 of the Act were to apply in such situations instead.

Other commenters who recognized the Class II area classifications as being pollutant-specific were concerned that EPA's proposal not to require section 107(d) area designations for PM_{10} would result in no Class II PSD areas for particulate matter, and thus no areas in which the section 163 Class II increments for particulate matter would apply. As mentioned earlier, EPA does not believe that Congress intended for either the section 163 increments or the section 107(d) area classification system to apply to PM_{10} . The EPA believes that new PM_{10} increments, developed pursuant to section 166 of the Act, can be applied independently from the section 107(d) area designations for TSP and the Class II areas—both of which determine the applicability of the section 163 TSP increments. Also, EPA will establish appropriate areas to which the PM_{10} increments will apply during the course of the upcoming section 166 rulemaking process.

Since EPA believes that the section 107(d) area designations for TSP are necessary to provide for the continued applicability of the section 163 Class II increments, it will decline to completely eliminate these TSP designations until PM_{10} increments are in effect and replace the existing TSP increments. As mentioned earlier, the Administrator believes that retention of the TSP increments is necessary during the interim to implement Congressional intent to keep air quality deterioration within the limits established by the statutory increment system.

Finally a number of commenters stated that since there is allegedly no scientific reason to retain the TSP-based increments (because there are no soiling or nuisance effects), an EPA decision not to eliminate TSP as the indicator for the PSD increments would be a violation of the binding and enforceable settlement agreement in *CMA v. EPA*, D.C. Cir., No. 79-1112.²⁶ These

comments actually addressed EPA's earlier proposal on March 20, 1984 (49 FR 10408), which in addition to proposing revisions to the NAAQS for particulate matter proposed not to change how "particulate matter" would be defined for the purposes of the PSD increments. In that proposal, the Administrator indicated that based on EPA's review of the data, particles larger than 10 microns could contribute to soiling and nuisance and therefore may have substantial welfare effects. Consistent with this finding, the Administrator proposed to retain TSP as the indicator for the secondary NAAQS for particulate matter, and consequently for the PSD increments, because it includes most of these larger particles and could therefore be a better indicator of all particles that produce soiling and nuisance. The Administrator also raised the possibility that a size cutoff below TSP could ultimately be selected to replace TSP as the indicator for the secondary NAAQS, but even if that were to occur, there was considerable question as to whether EPA could then adopt the same cutoff for the purposes of the PSD increments (49 FR 10421).

By the terms of the *CMA* agreement itself, the Administrator believes that he acted appropriately in then proposing to retain TSP as the indicator for the PSD increments and concluding that the contemplated interim relief was not available. In any event, the thrust of the settlement provision was to cause EPA to initiate a rulemaking on the question of how the NAAQS revisions for particulate matter should affect the particulate matter increments. In no way was it intended to bind EPA to any particular outcome. Here EPA in its 1984 proposal not to change the increments and its 1985 proposals on PSD increment issues in general certainly initiated such a rulemaking—indeed a rulemaking that has resulted in thorough public discussion, debate, and subsequent Agency deliberation. Thus the spirit as well as the letter of the provision has been satisfied.

Moreover, the Administrator now firmly believes that for the reasons set forth earlier in this section of the preamble, Congress intended the section 163 increments for particulate matter to

be measured as TSP. The Administrator is taking the course of action he believes was intended by Congress to implement different "particulate matter" increments. That is, he will promulgate new PM_{10} increments in accordance with section 166 of the Act and allow such increments to the extent that they are equivalent to replace effectively the statutory TSP increments at the appropriate time.

g. *Prevention of Significant Deterioration Monitoring.* The Administrator proposed a new significance level, expressed as an ambient concentration of PM_{10} , for PSD monitoring purposes. He proposed that a concentration of $10 \mu g/m^3$ (24-hour average) be used as a criterion to determine whether a PSD applicant would be required to collect (or, conversely, be excluded from having to collect) ambient PM_{10} data for the 1-year period preceding submittal of a complete PSD application. The Administrator also indicated that the significant ambient concentration for TSP, $10 \mu g/m^3$ (24-hour average), would be retained due to the proposed TSP secondary NAAQS.

In addition to proposing a significant ambient concentration for PM_{10} , the Administrator proposed a transition program related to the preapplication monitoring requirements for PM_{10} (see section h. *Transition Provisions* for details on the proposed provision, issues raised by commenters, and EPA's response). As part of the proposed program, the Administrator indicated that he intended to allow the use of ambient data collected from samplers not designated as PM_{10} reference or equivalent methods until such reference or equivalent methods are designated and made commercially available. The Administrator specified PM_{10} , PM_{15} , and TSP as the particulate matter size fractions which could be measured from acceptable alternative samplers. This data would then be used in accordance with EPA-approved estimating procedures to demonstrate compliance with the PM_{10} NAAQS.

The EPA received no comments opposing the proposed significant ambient concentration for PM_{10} ; several commenters expressed general support for the proposed value. However, several commenters did raise certain questions concerning the proposed monitoring and ambient air estimating procedures. These procedures would be used to meet the preapplication monitoring and air quality analysis requirements for PM_{10} during the transition period before PM_{10} reference

²⁶ Pursuant to a settlement with petitioners in *Chemical Manufacturers Association v. EPA*, D.C. Cir. No. 79-1112, the EPA agreed to propose revisions to certain PSD requirements, if appropriate, at the time it proposed revisions to the particulate matter standards on public health or

welfare. In relevant part, the settlement stated that "[w]hen EPA proposes a new size cutoff for purposes of the NAAQS, it shall also propose: (a) A new size cutoff for PSD purposes that would remain in effect indefinitely (i.e., the permanent PSD cutoff); and (b) an interim size cutoff for PSD purposes to remain in effect until EPA takes final action on the permanent PSD cutoff. The interim cutoff will exclude only those particles which clearly appear not to pose substantial health and welfare risks and therefore are highly likely to be excluded permanently."

or equivalent methods become available.

One commenter stated that EPA needs to address the frequency of required monitoring since this is not addressed with respect to PSD monitoring. Since States are required to conduct daily monitoring for 1 year at high priority sites, the commenter asked whether PSD applicants would be required to do the same.

The EPA addressed the frequency of PSD monitoring for PM_{10} in its draft revisions to the EPA document entitled "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," which was made available for review during the public comment period. The Administrator intends to retain the language contained in the draft guidance which described different sampling frequencies as appropriate for use with PM_{10} , $PM_{2.5}$, or TSP data used to demonstrate compliance with the PM_{10} NAAQS. The frequencies described are consistent with the final 40 CFR Part 58 sampling frequencies as published elsewhere in today's Federal Register.

Another commenter questioned EPA's ability to use undesignated interim alternative sampling methods to gather ambient PM_{10} data. This commenter stated that EPA must instead propose and subject the interim sampling methods to public and scientific review before any final monitoring implementation rule is promulgated. The Administrator disagrees with this position for two reasons. First, the Clean Air Act requires States to submit control strategies to EPA within 9 months of the revision of the NAAQS. However, it will take approximately 6 months after promulgation of the PM_{10} NAAQS before PM_{10} reference method samplers are designated. The EPA's policy, therefore, is to require States to use available particulate matter data for PM_{10} SIP evaluation and planning purposes during the period before reference methods are designated. The use of interim methods for PSD purposes is also considered acceptable by EPA. Thus, when PM_{10} data are required during the transition period and PM_{10} reference method data are not available, particulate matter data that must be used in order of preference are PM_{10} nonreference method data, $PM_{2.5}$ data, and, for up to 10 months after the effective date of the new requirements, TSP data.

Second, on March 20, 1984, EPA did propose in Appendix J of Part 50 a general reference method for determination of particulate matter as PM_{10} in the atmosphere. Public comments were taken and were considered before final promulgation of this reference method. Actual

designation of reference method samplers, however, does not require proposal in the Federal Register. Under the existing 40 CFR Part 53 regulations, EPA has the authority to designate reference or equivalent method samplers without first proposing the method(s) in the Federal Register for public comment provided that the methods meet the performance specifications and other requirements contained in Parts 50 and 53.

Concerning efforts to meet the air quality analysis requirements before a reference method is available, one commenter stated that EPA must propose for comment the specific "estimating procedures" that must be used to determine ambient concentrations of PM_{10} based on data collected from undesignated samplers.

The commenter was apparently not aware that the prescribed "estimating procedures" were provided in the draft revisions to EPA's PSD monitoring guideline referenced above. The monitoring guideline actually reflects guidance provided elsewhere for purposes of SIP development which prescribes that $PM_{2.5}$ data be multiplied by a correction factor of 0.8, and that PM_{10} data be used directly even though it was collected with a nondesignated reference or equivalent method. In addition, the monitoring guideline allows TSP data to be used only as a one-for-one substitute for comparison to the PM_{10} standards and only during the first 10 months of the monitoring transition. The use of PM_{10} and $PM_{2.5}$ data will result in much less uncertainty than the practice of comparing existing TSP data to the PM_{10} standards. Alternatively, awaiting the availability of reference method monitoring and making no estimates of the PM_{10} particulate matter air quality in the meantime would be even less desirable in light of the need to demonstrate ambient impacts of proposed sources on the PM_{10} NAAQS.

h. Transition Provisions. The Administrator proposed several provisions which would delay for some applicants all or some of the new PSD requirements for PM_{10} . Complete exclusion from the new requirements was proposed under two grandfather provisions. The first excluded from review sources that were not previously subject to PSD review, provided that the sources: (a) Have already obtained all the necessary approvals under the SIP before the effective date of the new requirements, and (b) commenced construction within 18 months of the effective date of the new requirements (or any earlier time required under the SIP).

The second grandfather provision excluded from PM_{10} review any sources that have submitted a complete PSD application (including those for which a final determination has not yet been made) to EPA or its delegated representative on or before the promulgation of the Part 52 PSD amendments for PM_{10} .

In addition to the above provisions, the Administrator proposed to enact a transition program to phase in the new requirements for PM_{10} monitoring. These monitoring provisions were necessary because the proposed grandfather provisions could not offer adequate relief to those applicants whose applications had not been submitted but whose on-site monitoring efforts were well underway, except, of course, for any new PM_{10} monitoring that would otherwise be required.

There were several other factors that influenced the design of the monitoring transition program as well. One important factor was the concern that development of ambient PM_{10} samplers suitable for designation as reference or equivalent method samplers could be delayed as long as 1 year. Another was that once the samplers became available and designated, additional time would be needed for applicants to actually install and calibrate the samplers on site before a PM_{10} sampling network could begin to operate. Finally, the PSD regulations require that a minimum of 4 months of data must be collected from any site [see section 52.21(m)(1)(iv)] and submitted as part of the complete PSD application.

Taking into account these factors, the Administrator proposed three provisions to phase in the preapplication monitoring requirements for PM_{10} . The first of these provisions gave the Administrator discretionary authority to exempt from the PM_{10} ambient data requirements certain PSD applicants who would become subject to the requirements because of PM_{10} , provided the applicant submitted an otherwise complete application within 10 months after promulgation of the Part 52 PSD amendments for PM_{10} .

The second proposed provision allowed eligible applicants to sample PM_{10} using nondesignated PM_{10} or $PM_{2.5}$ samplers during the period of time when they would be unable to establish a PM_{10} monitoring network utilizing designated PM_{10} samplers. In the proposal, the preamble incorrectly indicated that TSP data would also be acceptable during this phase but EPA's draft monitoring guidance made available for public comment correctly indicated that TSP monitoring data

would not be accepted for PM₁₀ purposes, but only for comparison with the then proposed TSP secondary NAAQS. This provision would affect complete applications (except for PM₁₀) submitted between 10 and 16 months after promulgation of the PSD amendments for PM₁₀.

The third and final proposed provision relating to the phase-in of PM₁₀ monitoring equipment allowed certain applicants to commence reference method PM₁₀ monitoring and gather ambient data over only the period extending from the date 12 months from promulgation of PM₁₀ amendments to the date the application becomes otherwise complete with respect to all other existing monitoring requirements. This provision applied to complete applications (except for the PM₁₀ monitoring requirements) submitted between 16 and 24 months after promulgation.

The Administrator also proposed to allow States to adopt transition provisions for PM₁₀ monitoring if the provisions are compatible with the intent of the Federal transition provisions proposed in the Part 52 PSD regulations.

Grandfather provisions. While most commenters expressed general support for EPA's proposed grandfather provisions which protect certain sources from having to meet the PSD requirements for PM₁₀, a few concerns were noted.

One commenter objected to the use of different qualifications for grandfathering sources not previously subject to PSD versus sources previously subject to PSD. For the former category, sources are grandfathered only if they have received all otherwise required preconstruction approval and permits and commence construction within 18 months. In the latter category, sources are grandfathered if they have merely submitted an otherwise complete PSD application. The commenter felt this provided inequitable treatment to sources, and that it would be more fair and rational to grandfather all sources based on the submittal of a complete application.

The EPA does not believe that the alleged discrepancy in the two provisions as they were intended to be applied is inequitable. However, in reviewing the proposed provisions, EPA recognized that there was some ambiguity as to exactly who would be eligible for grandfather status under each provision. The EPA intended the first grandfathering provision to apply to all sources not previously subject to PSD for particulate matter, even if they were

subject to PSD for some other pollutant. The EPA intended the second grandfathering provision to apply only to those sources that were previously subject to PSD for particulate matter and had consequently included analyses for particulate matter in their PSD applications. The use of more lenient grandfathering qualifications for sources previously subject to PSD is keyed to the presence of particulate matter analyses in the completed application. The EPA has clarified the grandfather provisions in the final action to remove the stated ambiguity [see new section 52.21(i)(4)(ix) and (x)].

In addition, to further enhance consistency between the two provisions, EPA has also changed the wording of the second grandfather provision so that the same eligibility cutoff date is used for excluding sources from the new PM₁₀ amendments. Under the proposed language, applicants previously subject to PSD (for particulate matter) would have had an extra day (i.e., "on or before" versus "before") in which to gain grandfather status. Based on these changes, EPA does not agree that an inequity exists between the two new grandfather provisions.

The EPA has found it necessary to make several other changes to the new grandfather provisions. First, the second grandfather provision in today's notice contains a key final sentence that was unintentionally omitted from the provision as originally proposed. Without this sentence, the affected source or modification would have been excluded from the original PSD requirements for particulate matter in addition to being grandfathered from today's amendments. This was clearly not the intent of the provision. The proposed grandfather rules were to exempt applicants from new requirements but require them to continue to meet existing requirements instead.

Secondly, the date upon which both provisions will be based is changed to the date 30 days from today's date of publication. The proposal, in using the date of publication, did not take into account the fact that the amendments being published in today's *Federal Register* will become effective 30 days later. Finally, reference to the August 7, 1980, PSD regulations in both of the proposed grandfather provisions has been changed because this reference does not properly account for PSD amendments occurring since August 7, 1980. Those sources or applicants which may be grandfathered from the new PM₁₀ amendments are expected to meet the Part 52 PSD requirements, including applicable amendments made after

August 7, 1980, which are in effect immediately preceding the effective date of the new PM₁₀ amendments.

Several commenters noted that EPA should also include these proposed grandfather provisions in section 51.24 (recodified as 51.166) where States have the permitting authority, and not just include them in the Part 52 PSD regulations where EPA or its delegate is the permitting authority. The Administrator agrees that States with approved PSD regulations in their SIP's should have the same ability to grandfather certain sources from the new PM₁₀ requirements. Although it was not mentioned in the proposal, States may adopt such provisions in their regulations and EPA will approve them pursuant to section 51.166(a)(6)(ii) which requires that when a State revises its PSD rules it must specify when and as to what sources such revisions will take effect. Consequently, there is no need to further amend the section 51.166 PSD requirements to satisfy the commenter's concern.

Monitoring Transition. Many commenters expressed general support for EPA's proposed phase-in of the new PSD monitoring requirements for PM₁₀. Some of these commenters, however, gave recommendations that would change the transition procedures in certain ways.

Most of the commenters expressed concern about the eventual availability of an acceptable sampling method. One commenter stated that EPA should delay action on its PM₁₀ proposal until an acceptable reference method sampler is available for widespread use by PSD permit applicants. Another commenter stated that EPA should allow the States to waive or to adjust the PM₁₀ monitoring requirement on a case-by-case basis beyond the time periods provided if a sufficient supply of approved PM₁₀ monitoring equipment is not available. Yet another commenter went further by stating that the PSD requirements should contain some triggering mechanism requiring the Administrator to take an affirmative action finding that monitors are available before requiring their use.

Finally, a commenter said that all three transition provisions should apply uniformly to all applicants who meet the requirements and should be revised to reflect the delayed effective date of EPA's PSD regulations. (This commenter recommended a 9-month delay before the Part 52 PSD regulations would apply.) That is, the first transition provision should exempt from PM₁₀ monitoring those applicants who submit a complete application within 3 months

after the effective date of the PSD amendments for PM_{10} ; the second provision should apply to applicants who submit a complete application between 12 and 18 months after promulgation of the revisions and should allow them to monitor PM_{10} or other particulate matter size fractions during the interim period when approved samplers are not available; and the third provision should apply to applicants who submit complete applications from 18 to 24 months after promulgation, requiring sampling with designated samplers beginning 12 months after promulgation.

The Administrator believes that the concern relating to potential unavailability of reference or acceptable PM_{10} samplers is no longer a valid issue. At the time of the 1985 proposal, it was generally agreed that relatively few acceptable PM_{10} samplers were readily available. However, since the 1985 proposal, at least 900 commercially available PM_{10} samplers have been placed in operation by State and local agencies and suppliers are already advertising the availability of PM_{10} samplers that will meet the proposed requirements.

The Administrator believes that the three transition periods as proposed are reasonable, provide sufficient flexibility for implementation, and do ensure that adequate estimates of ambient PM_{10} concentrations are available for air quality analysis purposes. Consequently, no changes to the proposed PSD regulations or draft PSD monitoring guideline are being made based on concerns over the unavailability of PM_{10} samplers. However, with respect to the effective date of EPA's Part 52 PSD regulations, the Administrator has revised the language in the monitoring transition provisions to replace the reference to the date of promulgation with the effective date of the regulations which is actually 30 days later.

2. Nonattainment New Source Review Requirements

In the 1985 proposal, the Administrator proposed separate sets of preconstruction NSR requirements with respect to the primary and secondary NAAQS for particulate matter. The EPA did this because: (1) the NAAQS proposal included PM_{10} primary standards and TSP secondary standards, and (2) the Administrator proposed to establish implementation requirements for attaining the PM_{10} primary NAAQS using the section 110 pathway and requirements to implement the TSP secondary NAAQS using the Part D pathway. While concentrating on

these particular assumptions, the Administrator also described alternative programs that could result from subsequent decisions to use different implementation pathways for either the primary or secondary NAAQS, or to select the PM_{10} indicator for the secondary NAAQS, thereby eliminating TSP-based NAAQS altogether.

For the primary PM_{10} NAAQS, the Administrator proposed that the PSD program (as described in the previous section) in conjunction with the requirements in section 51.18(k) [now recodified as 51.165(b)], concerning protection of the NAAQS in designated section 107 attainment and unclassifiable areas as required by section 110(a)(2)(D) of the Act, would apply in all areas to major sources or modifications whose PM_{10} emissions would cause or contribute to NAAQS violations. The Part D NSR requirements under section 51.18(j) [now recodified as 51.165(a)] and the construction ban under section 52.24 would have no applicability to PM_{10} . However the Administrator proposed that until States received EPA approval for their section 51.165(b) program for PM_{10} Section III of the Offset Rule (40 CFR Part 51 Appendix S (1985)), would govern the preconstruction review process for PM_{10} .

Under section 51.165(b), the EPA proposed both to add requirements for PM_{10} and to clarify the existing requirements as they apply to other criteria pollutants as well. First, EPA proposed to establish annual and 24-hour significant ambient impact levels for PM_{10} similar to the existing levels for other pollutants which would be used to determine when a source's emissions are considered to cause or contribute to a NAAQS violation at any location. Sources having a modeled significant ambient impact must address such impact by getting emission offsets. The EPA proposed values of $1 \mu g/m^3$ (annual) and $5 \mu g/m^3$ (24-hour average).

With respect to the applicability of the section 51.165(b) program requirements, EPA proposed to clarify that major source status would be based on the applicable definition under section 302(j) of the Act, i.e., 100 tpy or more of any regulated pollutant. Using this definition, section 51.165(b) covers all PSD sources as well as certain non-PSD sources, namely sources that have the potential to emit more than 100 tpy (but less than 250 tpy) of any regulated pollutant and are not included on the 28-source category listing for PSD.

For PSD sources, EPA proposed that the requirements of section 51.165(b) would be applied in addition to all applicable PSD requirements. For non-

PSD sources, section 51.165(b) would apply in addition to any other applicable preconstruction review requirements in the approved SIP.

The Administrator also indicated that he would give States considerable flexibility in designing an offset program under section 51.165(b) as necessary to prevent new or modified major sources from causing or contributing to a NAAQS violation. He proposed that, as a minimum, an approvable section 51.165(b) program would merely have to require emission offsets which: (1) Provide a net air quality benefit, and (2) conform with creditability criteria at least as stringent as the offset criteria set forth under section 51.18(j) [recodified as 51.165(a)]. However, because of the broad range of nonattainment situations that section 51.165(b) would be expected to deal with in the absence of Part D applicability for PM_{10} , the Administrator also requested comments concerning the need to impose additional Part D-like requirements such as LAER and statewide compliance.

The Administrator's proposal with respect to the proposed secondary TSP NAAQS called for a continuation of the Part D-based NSR requirements except for the construction ban under section 52.24 should he select the Part D implementation pathway as proposed. Thus sources proposing to locate in areas designated nonattainment under section 107 for TSP would have been required to fully offset their proposed particulate matter emissions, apply LAER, and ensure that all other sources under common ownership statewide were in compliance or on a compliance schedule.

If he were to choose to implement the revised TSP secondary NAAQS under section 110 rather than Part D, the Administrator indicated that the PSD requirements in conjunction with the section 51.165(b) requirements would apply to TSP in the same manner as proposed for the primary PM_{10} NAAQS. Moreover, in the event that the Administrator set the secondary NAAQS equivalent in all respects to the primary PM_{10} NAAQS, then the preconstruction requirements proposed for the primary PM_{10} NAAQS would apply for the secondary NAAQS as well.

Finally, while proposing that no construction ban under either section 110(a)(2)(1) or section 173(4) of the Act would apply to PM_{10} , the Administrator raised the issue of whether to consider imposition of a construction ban for PM_{10} under authority of section 301 if a State failed to meet its obligation to

submit an acceptable plan revision within the required 9-month time frame or failed to implement a plan after it had been approved.

The commenters' views on the proposed NSR requirements were generally based on whether they supported a section 110 or a Part D implementation pathway. The majority of commenters, believing that the development of SIP's for any NAAQS revision should be governed by section 110, opposed any retention of Part D-based NSR requirements. These commenters supported an offset requirement under section 51.165(b) as proposed, but disagreed that EPA had any authority to impose LAER or other requirements under Part D or the Offset Rule—even during the interim period before States submitted and received EPA approval of their section 51.165(b) program for PM₁₀.

A few commenters who supported an integrated section 110/Part D implementation pathway felt that it would be inappropriate for EPA not to continue imposing Part D NSR requirements where PM₁₀ NAAQS violations may exist. One commenter stated that by failing to do so, one must conclude that Congress intended a more relaxed regime for the persistent particulate matter problems than it required earlier for initial particulate matter nonattainment problems.

For reasons stated earlier, the Administrator finds no statutory basis for applying Part D to PM₁₀ and thus it would not be appropriate to try to impose for PM₁₀ purposes the NSR requirements for LAER or statewide compliance contained in Part D of the Act. The Administrator here wishes to reemphasize the fact that the nonapplicability of Part D does not result simply because EPA is revising the NAAQS for particulate matter, but because such revisions are believed to result in significant new planning burdens required to demonstrate attainment of the revised PM₁₀ standards.

In taking the position that Part D does not apply to the revised primary NAAQS, the Administrator acknowledges that, as one commenter noted, the NSR program for PM₁₀ may in some respects represent a relaxation of the nonattainment NSR program that had been required for TSP. The Administrator believes that this must occur, however, under the implementation scheme that Congress appears to have intended when a NAAQS revision causes significant new planning burdens. Nevertheless, States are still required to revise their SIP's (including the applicable NSR

requirements) to demonstrate attainment of the revised NAAQS within the time frame required by Congress. Even if the PM₁₀ preconstruction review program adopted by a State appears to be a weakened one by comparison, the PM₁₀ SIP must show that attainment of the revised NAAQS will occur within 3 years.

Where violations of the PM₁₀ NAAQS already exist, some States may indeed find that the minimum required offset program under section 51.165(b) is not adequate to address the nonattainment problem. Such States must then decide to what extent it may be appropriate to establish additional preconstruction review requirements for major new or modified sources under section 51.165(b) in addition to requiring emission reductions from existing sources of PM₁₀. The Act, under a section 110 implementation pathway, gives States adequate flexibility to take the measures they deem appropriate and necessary to demonstrate attainment of the revised PM₁₀ NAAQS within 3 years.

Several commenters opposed EPA's proposal to apply the requirements under the offset rule to govern certain preconstruction review until the State submitted and received EPA approval of its section 51.165(b) program for PM₁₀. These commenters stated that EPA is not justified in proposing to impose the Part D-type requirements of the offset rule, i.e., LAER and certification of statewide compliance, until the State has failed to meet the statutory deadline for achieving the revised NAAQS.

The EPA has reviewed the proposal in light of these comments and agrees that it would not be appropriate to apply the requirements of the offset rule to PM₁₀ at this time. However, until States revise their SIP's to demonstrate attainment and maintenance of PM₁₀ NAAQS and presumably redesignate TSP nonattainment areas to unclassifiable areas, they will be expected to continue implementing, where applicable, a preconstruction review program for particulate matter based on their existing TSP-based nonattainment area requirements which may include the provisions of the offset rule. The requirements which the Administrator is today promulgating will not seek to impose the offset rule directly with respect to PM₁₀.

An air pollution control agency opposed EPA's proposal to use only section 51.165(b) to define NSR permitting requirements for PM₁₀. The commenter criticized EPA's approach by saying that due to the language of the regulation, section 51.165(b) could neither adequately address PM₁₀ nonattainment situations nor ensure

progress toward attaining the PM₁₀ standards. At the center of the commenter's concern is the ambient impact screening test which EPA allows States to use as part of the applicability requirements for section 51.165(b). First, the commenter claimed that section 51.165(b) would provide no effective control of PM₁₀ emission growth because new sources could be permitted to construct without sufficient mitigation if modeling fails to demonstrate a significant ambient impact. In comparison, under EPA's Part D-based nonattainment NSR requirements, there would be no ambient test and each major source locating in a nonattainment area would be presumed to contribute to the existing air quality problem.

Second, the commenter stated that section 51.165(b) provides no mechanism for addressing precursors to nonattainment pollutants. That is, because of the ambient impact screening test, section 51.165(b) is dependent on the capability of models which are not available to accurately predict downwind concentrations.

In response to the commenter's first concern, section 51.165(b) does allow states to exclude certain sources from its coverage on the basis of their insignificant modeled ambient impact. In proposing the significant ambient impact levels for PM₁₀, EPA sought to enable States to use the same de minimis modeling test for PM₁₀ that is already available for other criteria pollutants to determine whether the modeled ambient impact of a new source or modification would significantly affect the air quality. At points beyond the location where a source would have significant modeled impacts, the source's impact would not be sufficient to cause or contribute to a NAAQS violation.

These de minimis numbers are keyed to the limits of reliability of the models used to predict a source's ambient impact some distance away. The commenter correctly points out that the use of such significant levels may not be desirable for applying the section 51.165(b) program to PM₁₀ when a serious nonattainment situation is known to exist in the area where a source proposes to locate. (A similar problem could occur for any other pollutant as well when a State chooses not to redesignate an area to nonattainment under section 107 even though a widespread nonattainment situation may exist.)

Under such conditions of widespread NAAQS violations, EPA advises States to consider a more stringent

applicability framework than the one minimally set forth under section 51.165(b), based on criteria other than modeled ambient impacts. Such additional stringency could include a provision to require offsets from all sources—even those that the ambient screening test would otherwise exempt. The Administrator continues to believe, however, that it is generally reasonable to apply the de minimis test under section 51.165(b) to determine whether the modeled ambient impact of a source would significantly affect air quality. Since that is the intended purpose of the de minimis provisions, EPA therefore finds it appropriate to promulgate the proposed PM_{10} values.

It should be pointed out that when a source is allowed to be excluded from the section 51.165(b) requirements on the basis of its de minimis impact in the affected area, the SIP for PM_{10} must continue to account for any potential accumulation of such allowed de minimis emission increases which affect the NAAQS exceedance. Presumably the SIP will address this through additional emission reductions at existing sources.

In response to the commenter's second concern about the lack of models to predict PM_{10} levels caused by precursors, the Administrator anticipates that this is only a temporary drawback. The EPA is developing modeling methods that will estimate ground level PM_{10} concentrations caused by precursors. Where the contribution of PM_{10} precursors is anticipated to be of significant concern, EPA also permits the development of site-specific models to estimate precursor contribution to the source's ambient PM_{10} impact.

The same government agency commenter, noting that EPA proposed to grant States considerable flexibility in designing their emission offset program under section 51.165(b), suggested that intrapollutant offsets for secondary pollutants be accepted as mitigation for PM_{10} emission increases. The Administrator recognizes that secondary aerosols in the form of sulfates and nitrates may contribute significantly to the ambient PM_{10} levels in a number of locations and believes that in certain situations intrapollutant offsets could be considered appropriate to enable States to effectively address such problems. This matter further points to the need for models to predict the ambient PM_{10} concentrations caused by PM_{10} precursors. The Administrator intends to review on a case-by-case basis State requests to incorporate in the SIP a provision which would allow precursor offsets for PM_{10} .

Several commenters supported the need for creditability criteria for emission offsets required as part of a section 51.165(b) program; however, two commenters specifically questioned the need for the offsets to be federally enforceable. One commenter in particular claimed that the process of ensuring that an offset is "federally enforceable" rather than simply "enforceable" can be burdensome, time-consuming, costly, and unnecessary if the source owner is already subject to a State permit condition that requires the emission reduction and is enforceable by the State.

The general issue of federally enforceable emission reductions (offsets) is being addressed in a separate rulemaking action. On August 25, 1983, EPA proposed amendments which among other things proposed changes to the Federal enforceability requirements contained in a number of preconstruction review provisions, including the requirement for federally enforceable emission reductions (48 FR 38742). Specifically, EPA proposed to delete the requirement in section 51.18(j)(3)(ii)(e) [recodified as 51.165(a)(3)(ii)(e)] that emission offsets obtained by one source from another source in order to obtain preconstruction approval be federally enforceable. Subsequent to that proposal, EPA received extensive public comment which is being subjected to careful review.

The Administrator finds no basis for evaluating the issue of Federal enforceability separately with regard to PM_{10} and he will take final action on the August 25, 1983, proposal at the appropriate time. Until such time as a final action is taken, the requirement for Federal enforceability of emission offsets will continue to apply to all pollutants, including PM_{10} . In the event that EPA deletes the existing requirement for Federal enforceability in section 51.165(a)(3)(ii)(e), then the change would also be applied to PSD offsets.

A number of commenters strongly opposed any attempt by the Administrator to impose a construction ban for PM_{10} under any circumstances. Some of these commenters noted that section 110 does not provide the Administrator with any authority to reestablish a ban to stimulate timely PM_{10} SIP development. Other commenters agreed, adding that even section 301 with its narrow, gap-filling grant of authority is not an appropriate implementation vehicle for something as "major, extraordinary, and controversial" as the ban.

Some commenters expressed the opinion that imposition of a construction ban could actually worsen the nonattainment problem because it would prevent areas from obtaining the net emission reductions provided by new and modified sources through their offsets and also the replacement of older, higher emitting facilities with newer, better controlled ones.

A few commenters noted that the ban penalizes the wrong party since stationary sources are generally not responsible for inadequate SIP's. Others added that a better way to deal with recalcitrant States is to use the funding sanctions of section 176(b) and 105, and the EPA SIP promulgation authority of section 110(c)(1), all of which directly affect the States.

Two commenters stated that if the ban is to be used, it should be imposed only on a case-by-case basis after an opportunity for a public hearing, and only when emissions from stationary sources are the cause of the problem.

In support of a construction ban, several commenters stated that the existing construction ban is applicable because section 110(a)(2)(I) applies to all post-1979 SIP submissions. One of these commenters stated that if EPA decides that section 110(a)(2)(I) does not apply, then it would be appropriate for EPA to establish a provision equivalent to section 110(a)(2)(I).

Because the Administrator has concluded that Congress did not intend the Part D requirements to apply to such NAAQS revisions as are being promulgated today, it would be inappropriate in the absence of statutory authority for EPA to impose the existing Part D-based ban provisions under section 110(a)(2)(I) and section 173(4) with respect to PM_{10} . In addition, today's action does not include any new provisions for imposing a construction ban for PM_{10} sources under the Administrator's section 301 authority. The EPA does not believe it would be appropriate to consider the need to impose such a ban until States have first had an opportunity to prepare and begin implementing SIP's which provide for attainment of the revised PM_{10} NAAQS.

Nevertheless, EPA intends to fully analyze all of the legal issues and reserve for a future determination the appropriateness of, and authority for, imposing a construction ban under sections 110(c) and 301 of the Act on a case-by-case basis in States that fail to develop PM_{10} SIP's in a timely manner or fail to implement a PM_{10} SIP after it has been approved by EPA. Where authorized and appropriate, EPA will also consider the use of other sanctions,

such as funding sanctions or Federal rule promulgation to stimulate the development and implementation of plans which adequately demonstrate timely attainment and maintenance of the PM₁₀ NAAQS.

E. Comments on Technical Issues

Along with the notice of proposed rulemaking, EPA issued a draft "PM₁₀ SIP Development Guideline." Several comments were received regarding development of PM₁₀ emission inventories, air quality modeling procedures, PM₁₀ source testing procedures, and other matters covered in the guideline.

1. Preparing an Emission Inventory

Several commenters recommended that EPA amend its PM₁₀ SIP Development Guideline to provide guidance on how to inventory directly emitted nitrates and sulfates and that the definitions of "particulate matter emissions" and "PM₁₀ emissions" be revised to include secondary particulate matter precursor emissions.

The size specific emission factors developed by EPA for various particulate matter source categories include directly emitted nitrates and sulfates, but do not specifically identify the portion of the emission factor that is primary nitrate or sulfate. However, EPA has published chemical characterization information for a number of source categories which could be used to estimate the fractional emissions of primary nitrates and sulfates. This information is available in Receptor Model Source Composition Library, EPA-450/4/85-002.^o

The EPA does not agree that secondary particulate matter precursor emissions should be included in the definition of particulate matter emissions. Particulate matter emissions are intended to include materials which are directly emitted from sources as particles. Directly emitted particles are distinctly different from secondarily formed particles, which are emitted as gases and form particulate matter as a result of chemical reactions that occur some time after being emitted by a source. As such, secondary particulate matter precursor emissions contribute to ambient PM₁₀ concentrations but do not contribute to PM₁₀ emissions per se.

2. Emission Factors

Commenters stated that EPA has no detailed emission information upon which to base the development of PM₁₀ emission factors since a standard reference source test method has not been adopted for PM₁₀ emissions. The commenters believe there are significant

technical problems with the two basic PM₁₀ measuring techniques (cascade impactors and multistage cyclones) and with measuring condensable particulate matter. Also, the commenters allege that the use of particle size fraction multipliers in conjunction with existing emission factors requires excessive attention to specific source characteristics to prepare a realistic emission inventory.

As part of a special data collection effort to develop PM₁₀ emission factors for certain source categories, starting in the 1970's, EPA tested and evaluated several particle size source sampling techniques. The PM₁₀ source test protocols were developed and utilized in collecting data for the development of PM₁₀ emission factors under this program. While it is true that EPA does not have a standard reference method for PM₁₀ source testing, the Agency believes the data collected under the special PM₁₀ emission factor program were of good quality. Nevertheless, it is generally recognized that much of the particle size data collected and reported in the literature in the past are of limited value. Literature data were used by EPA to develop emission factors for sources not tested under EPA's field program. The limited quality of these data has been generally noted by the use of EPA's letter rating system for emission factors.

The EPA recommends that source-specific emission data be collected to characterize emissions from any particular source. This is particularly true for large point sources of PM₁₀, whose emissions are known to be a function of identifiable process and design variables. Emission factors and/or fractional multipliers are intended to be used as a fallback to estimate emissions when source specific data are not available.

The fractional multipliers represent an average of available test data and are most appropriately applied when estimating emissions from numerous sources in an areawide source inventory. Because these multipliers are averages, they will yield emission estimates and distributions that may not necessarily be representative of an individual source. However, when applied to multiple sources, these differences tend to balance out across the inventory. The EPA published particle sized emission factors in the *Compilation of Emission Factors*, AP-42, in September 1985 and Supplement A which was issued in October 1986.^p The EPA will continue to develop and update PM₁₀ emissions factors as more data become available.

3. Receptor Modeling

Industrial commenters stated that the receptor modeling techniques recommended by EPA (chemical mass balance, automated scanning microscopy and optical microscopy) have limitations that make their general endorsement for SIP development inappropriate at this time. They felt EPA should acknowledge that there are certain situations, primarily in simple air sheds, in which use of these techniques by technicians trained to understand the capabilities and limitations of each technique would assist in control strategy development. They recommended EPA should concentrate on standardizing and providing better guidance and training regarding these techniques.

The EPA does recognize the limitations (and strengths) of receptor modeling and our guidance reflects this. Receptor models should be used collaboratively with dispersion models, where possible, to apportion the contribution of sources to various receptors.

The EPA guidance reflects the fact that chemical mass balance (CMB) is most useful in those cases where: (1) The identification of source categories will provide sufficient information or, alternatively, that the impacts of specific sources within a category can be allocated by emission inventories or models; (2) the number of major impacting categories in an air shed is likely to be small. The EPA recommends that source profiles, based on source-specific data, be used in CMB just as source emission measurements are preferred to the use of AP-42 factors as the basis for emission estimates in dispersion model. As a fall-back, EPA has developed a source composition library which is a compendium of available source profile information that assigns a rating to each profile to assist the user in determining its usefulness. It is agreed that a PM₁₀ CMB analysis on TSP glass fiber filters is likely to be unsatisfactory in complex air sheds. The proposed guidance recommends that a CMB analysis be corroborated if possible by microscopic analysis, if TSP data collected on glass fiber filters are all that are available. Many areas have (or will have) PM₁₀ or PM₁₅ data collected on quartz fiber filters or Teflon filters or will likely obtain additional samples prior to SIP preparation.

Microscopic techniques will likewise be useful in conjunction with some models. Microscopy is less useful when a TSP sample collected on glass fiber filters is all that is available; it has been,

however, demonstrated to be valid as a corroborative technique with appropriately collected samples.

Agencies with moderately sophisticated technical staffs should be able to perform the CMB analysis after appropriate training. The EPA has conducted five workshops on receptor modeling nationwide; several have been conducted by the Air Pollution Control Association and private consultants have conducted several. The EPA has published a six-volume set of technical reports on receptor models which is available from NTIS. Volume IV of the Receptor Model Technical Series provides useful information to agencies interested in commissioning studies or interpreting results, though it is not an exhaustive treatment of the subject.

In some cases, a consultant will need to provide the necessary analyses just as some dispersion modeling is done by consultants. The EPA is revising the users guide for the CMB model and preparing a protocol for application and validation of that model, as well as a document explaining how differences between receptor and dispersion model results can be reconciled.^{1,2,3,4}

4. Dispersion Modeling

Two commenters raised concerns about the availability and applicability of air quality dispersion models in complex terrain. Both commenters suggested EPA either approve air quality dispersion models for use in such terrain or permit the use of simpler approaches.

Commenters also raised concerns about the ability of current air quality dispersion models to assess the impact of particle formation as a result of oxides of sulfur and nitrogen emitted to the atmosphere, i.e., secondary aerosols, on PM₁₀ air quality.

Commenters asserted that fine particles in general, and secondary aerosols in particular, are potentially major contributors to PM₁₀ in some areas and may originate outside of the region under the control of local or State authorities. They alleged gaseous as well as particulate matter emissions reductions may be needed to reduce PM₁₀ concentrations and that distant sources of precursors may prove difficult to identify.

The EPA does not intend that each area where complex terrain is of concern develop its own model where the State believes the available techniques do not accurately describe the physical circumstances. To eliminate the use of air quality dispersion models in complex terrain would be inappropriate because while receptor modeling and other similar approaches provide information relevant to the SIP

development effort, analyses using air quality dispersion models are more likely to include the meteorological circumstances resulting in the maximum expected air quality concentrations.

The EPA proposed the addition of another complex terrain screening model, the Rough Terrain Diffusion Model (RTDM), for use in performing these air quality analyses on September 9, 1986 (51 FR 32180). Use of these techniques, when approved, should result in more credible analyses of complex terrain impacts.

With regard to secondary aerosol, preliminary analysis of fine particulate matter data collected in the National Inhalable Particulate Network indicates that sulfate and nitrate generally total less than half of fine particulate matter on days with high concentrations. This indicates that a substantial portion of fine particulate matter in urban areas is likely to be of local origin.

The formation of secondary aerosols is the concern of many ongoing research activities within EPA as well as the scientific community at large. The validity of models that represent the formation of secondary aerosols must, however, be demonstrated to EPA, and approval for application of such models in a specific area must be received before incorporating the results in a SIP. The EPA is developing a model, the Particulate Episodic Model (PEM-2), that calculates for either one or two pollutants the average surface concentrations of both the primary (reactant) and secondary (reaction products) pollutants, provided they are coupled through a first-order chemical transformation. Its use in specific regulatory applications will have to wait until the model and its associated limitations can be established.

Where the contribution of secondary aerosols is anticipated to be of significant concern, EPA permits the development of site-specific models to address these concerns. With respect to determining distant sources of precursors, EPA is evaluating the performance of long range transport models. Therefore, none can be recommended at this time on other than a case-by-case basis. Recommendations on the use of long-range transport models will be accomplished through revisions to the Guideline on Air Quality Models.⁵ Appendix D of the SIP development guideline provides guidance on identifying the background portion of PM₁₀ and provides a working definition of background.

5. Source Sampling Devices and Procedures

A commenter stated that the two techniques available to measure PM₁₀ in a gas stream, cascade impactors and cyclone samplers, have numerous problems. Specifically, the commenter alleged that cascade impactors:

- Are very sensitive to small weight changes and operator error;
- Are not versatile enough to measure wide variations of particle concentrations and size distribution;
- Have significant wall losses;
- Are subject to particle bounce which affects reliability;
- Are affected by reactions between the collection medium and SO₂ in the gas stream; and
- Have difficulty achieving isokinetic sampling.

The commenter also alleged that cyclone samplers have many of the same problems, and that there is very little experience using cyclone samplers.

Appendix C of the PM₁₀ SIP Development Guideline describes modified Method 5 source sampling procedures that can be used to measure PM₁₀ in a gas stream. The EPA believes Appendix C procedures can be used by knowledgeable source testing personnel in the interim until development of a PM₁₀ reference method is completed. Several precautionary statements are made in Appendix C to make clear the fact that size selective measurements are more complex and require greater skill and attention to detail than Method 5 and 17 tests. Regarding sampler versatility, any one of several devices will cover the majority of conditions in ducts downstream of particulate matter controls with gas temperatures less than 650 °F. Wall losses for particles smaller than 10 micrometers are acceptably small, particle bounce can be avoided with proper operation, and reactions of SO₂ with the filter media can be prevented by pretreatment of the filter media.

6. Data Reduction

A commenter stated that the PADRE computer routine for test data reduction has shortcomings that make prediction of actual PM₁₀ emissions difficult. Specifically, the commenter stated, the PADRE program:

- Allows the use of generic calibration constants;
- Uses fixed cut-point data for any preseparator device; and
- Requires designation of a maximum expected particle diameter within the sample.

The PADRE was developed for analysis of cascade impactor data. It was used to facilitate entry of particle size data into the Fine Particle Emission Inventory System (FPEIS). The PADRE contains an algorithm for interpolating and to some degree extrapolating data to obtain size distribution information at diameters other than those provided directly by the impactors. The accuracy of this algorithm has been demonstrated to be reliable. The "generic" calibration constants used in PADRE are based on averages of calibration data for several specific samplers of each model of cascade impactor. When the corresponding stages from all units of the same model are averaged, the standard deviation of the averages for each stage are typically within 8 percent of the mean values.

The PADRE program does not assume a fixed preseparator cut point. Because equations and constants governing the performance of various precollectors are not the same, operators are expected to verify the cut point and input the correct value as part of the data entry into PADRE.

The maximum particle size of concern in the PADRE input is the maximum size in the sample. This can be measured with sufficient accuracy using a microscope. This value is used to establish a boundary condition in the algorithm used to extrapolate data to diameters larger than the maximum stage or precollector cut size. Since 10 micrometers is almost always within the span covered by the impactor and precollector cuts, extrapolation of data should seldom be needed. The EPA believes these procedures can yield results adequate for development of site specific emission factors if the suggested precautions are taken.

F. Comments on Miscellaneous Issues

1. Impact on New Source Performance Standards Program

The current 22 NSPS that reflect best demonstrated control technology for particulate matter have the effect of controlling PM_{10} . Therefore, EPA proposed to take the following actions on NSPS in response to a revision of the particulate matter standards:

(1) Complete an assessment of the current NSPS to determine whether or not to revise them because of PM_{10} considerations. The assessment would identify the source categories that are significant emitters of PM_{10} and condensable gases that form PM_{10} in the ambient air after release from the stack, and the effectiveness of the controls required to reduce such emissions. The EPA would then proceed to revise the

NSPS, giving highest priority to the most significant emitters of PM_{10} .

(2) Assess all NSPS for effectiveness in controlling PM_{10} when reviewed periodically as required by section 111(b)(1)(B) of the Act; and

(3) Consider PM_{10} in developing any future NSPS.

Several commenters stated that there is no inconsistency between having TSP-based NSPS requirements and having PM_{10} as the indicator of particulate matter in the NAAQS. The particulate matter regulated by the NSPS is measured by Reference Method 5, and is probably closer in size to PM_{10} than TSP after passing through the particulate matter control device almost invariably required on any source of such emissions subject to NSPS requirements.

The EPA acknowledges that NSPS for sources of particulate matter are not based on the NAAQS indicator whether that indicator is TSP or PM_{10} . Rather the standards are based on the effectiveness of control technology as measured by various reference test methods. Consequently, EPA does not intend to revise any NSPS at this time to account for revisions to the NAAQS. Since proposal, EPA has completed a draft screening study that identifies the NSPS source categories that are significant emitters of PM_{10} . As part of any future review of these NSPS under section 111(b)(1)(B) of the Act, EPA will consider the effectiveness of the NSPS in controlling PM_{10} . The EPA will also consider PM_{10} control in developing any future NSPS.

2. Economic Impact

The EPA determined that the particulate matter NAAQS proposal of March 20, 1984, was a major action and prepared a Regulatory Impact Analysis (RIA) as required by Executive Order (E.O.) 12291. However, the EPA determined that the proposal of April 2, 1985, as to how the standards will be implemented, did not in itself result in the economic effects set forth in Section I of the E.O. as grounds for finding a regulation to be a major rule.

A commenter disagreed with the Administrator's finding that the implementation proposal is not in itself a major action, especially if the PM_{10} standards are selected from the low end of the range proposed.

The EPA recognized that selection of a PM_{10} standard in the lower part of the range would be a major action. Accordingly, both the draft and final RIA account for those impacts. That analysis is discussed in the final action on new particulate matter standards that appears elsewhere in this Federal

Register and is also available in Docket No. A-82-37. Since both the draft and final RIA account for the level of the NAAQS selected, the EPA determined that no separate study was required for related actions taken to implement the NAAQS.

3. Annual Source Emissions Reporting

The proposal required States to report annually both particulate matter emissions data and PM_{10} emissions data and specified procedures applicable to annual reporting of emissions for both pollutants.

One State commented that it expects to estimate directly emitted amounts of PM_{10} by multiplying total particulate matter emissions [as reported to the National Emissions Data System (NEDS)] by PM_{10} size fractions and added that, "EPA has PM_{10} size fractions and could apply them to existing NEDS data for particulate matter." Based on this, and "the small contribution of point sources," the State proposed that EPA require PM_{10} emissions reporting only for sources where estimates are not made by applying a PM_{10} fraction to total particulate matter emissions.

Since the Administrator has determined that the indicator for the secondary standard should also be changed from TSP to PM_{10} , EPA does not require, as was proposed, annual reporting of both particulate matter emissions and PM_{10} emissions. Required annual reporting of particulate matter emissions ends with State reporting of calendar year 1987 emissions. Required annual reporting of PM_{10} emissions begins with State reporting of calendar year 1988 emissions. Since the reporting burden will not increase and since the ratio of PM_{10} emissions to particulate matter emissions can vary greatly among sources, it is better for the State to choose the appropriate method of determining PM_{10} emissions for each source.

One State noted that a basic problem will be the establishment of PM_{10} emission factors for sources and default values where data do not exist. This State also said that the criteria for source emissions reporting for PM_{10} should be a lower number than for particulate matter "as proposed in the offset rule significant emission rate determination."

The EPA agrees that providing emissions factors and default values is critical to the States' capabilities to comply with EPA's PM_{10} emissions reporting requirements. The EPA plans to provide this and other necessary information to States by the time needed

to meet the reporting requirements. The States' first annual reporting of PM₁₀ emissions begins with the reporting of calendar year 1988 emissions. Regarding the differences in the criteria for emissions reporting and the criteria for "significant emission rate determination" in the offset rule, EPA agrees that a lower number for reporting PM₁₀ would prove useful, since it could continue to require approximately the same number of sources to be reported. However, the reporting system is generally set up to track sources with 100 tpy or more of actual emissions regardless of the pollutant or the method used to measure that pollutant. This keeps the system limited to the very large sources of each pollutant, and EPA feels still provides the data needed for various types of national analyses at minimal resource costs. The "significance" values in the offset rule serve a totally different purpose; they are potential emissions (not actual) used to determine whether an emissions increase at an existing source should be subject to preconstruction review. The threshold values for new source preconstruction review, also in the offset rule, are generally 100 tpy for major sources as defined by statute which fits in well with the reporting requirement. Therefore, the threshold limit for emission reporting is not being changed.

One commenter stated that reporting PM₁₀ emissions to the Hazardous and Trace Emissions System (HATREMS) with other pollutants opens the door for false accusation of emitters of PM₁₀ as being emitters of hazardous materials.

The EPA's proposal to report PM₁₀ emissions to HATREMS was strictly for the purpose of data management. The NEDS does not have the capability to store data for both particulate matter and PM₁₀. The EPA plans to replace both the NEDS and HATREMS with a new facility subsystem being developed as part of the Aerometric Inventory Retrieval System. The subsystem will be able to store and retrieve emission data on all pollutants.

G. Comments on Procedural Issues

1. Extension of the Comment Period and Public Hearing

The proposal allowed a 60-day comment period for submission of written comments. It also provided an opportunity for oral comment and stated that persons wishing to present oral testimony at a public hearing should notify EPA within 2 weeks of publication of the proposal.

Several commenters requested a 60-day extension in the comment period.

One commenter made a request 45 days after the proposal notice requesting that EPA schedule a public hearing for a reasonable time (30 days) after the close of the comment period.

The EPA granted a 30-day extension of the public comment period. The EPA believes that a 90-day comment period provided the public with ample opportunity to submit written comments. The EPA did not hold a public hearing because only one commenter requested it, and the request was not made until 30 days after the deadline established in the proposal notice for such requests. The EPA felt that one untimely request did not indicate sufficient interest to justify scheduling a public hearing.

2. Reproposal

Because no scientific consensus existed on specific levels for the standards, and the analytical and policy basis for making these decisions under the statute were limited and difficult to implement, the Administrator did not propose specific standard levels but proposed a range of levels in the March 1984 proposal. The April 2, 1985, proposal of regulations for implementing revised particulate matter standards also included a variety of scenarios and implementation issues. The EPA proposed to implement a PM₁₀ primary standard under section 110 of the Act rather than Part D. The SIP development policy proposed was essentially the same as that promulgated today (i.e., dividing the country into Group I, II, and III areas). Implementation policies for a TSP secondary standard were proposed for both the section 110 and Part D pathways.

Several commenters felt that it was virtually impossible to comment on implementation of the revised particulate matter NAAQS as proposed because of the numerous alternative scenarios, what they termed undue complexity, and in places alleged incomprehensibility of EPA's discussion of its regulatory package.

The commenters listed several problem areas where they felt uncertainties must be resolved before an actual proposal on implementation issues could be published on which the public could meaningfully comment. Among these problem areas were: (1) Lack of a reference method for measuring particulate matter stack emissions; (2) lack of specified numerical values for the PM₁₀ primary standards; (3) lack of a decision on whether the secondary standard would be expressed as TSP or PM₁₀, and the specific numerical value for the secondary standard; and (4) lack of a clear legal "pathway" chosen to

implement the revised standards. Thus, the commenters felt EPA should withdraw the April 2, 1985, proposal and rewrite, simplify, and repropose the PM₁₀ implementation action after final action on the standards.

The EPA agrees that the proposal presented many options. However, EPA believes that each option was discussed in detail and the public had meaningful opportunity to comment on each option even though they did not know which option EPA would eventually choose. The EPA cannot repropose the SIP implementing provisions after the NAAQS are finalized because the Act requires the States to implement the standards as soon as they become effective. The Act requires States to submit SIP's to EPA within 9 months of promulgation of a standard. If EPA repropose the SIP implementation regulations and policy when the NAAQS were promulgated, EPA could not finalize them soon enough to give States time to develop their SIP submittals within 9 months.

VII. Regulatory and Environmental Impacts

A. Regulatory Impact Analysis

Under E.O. 12291, EPA must determine whether a regulation is a "major rule" for which an RIA is required. The EPA has determined the particulate matter NAAQS revision is a major action, and has prepared a RIA which is discussed in that notice. This action addresses the implementation of the revised NAAQS and does not itself result in the economic effects set forth in Section I of the E.O. as grounds for finding this regulation to be a major rule.

B. Impact on Small Entities

The Regulatory Flexibility Act requires that all Federal agencies consider the impacts of final regulations on small entities, which are defined to be small businesses, small organizations, and small governmental jurisdictions (5 U.S.C. section 601 et seq.). The EPA has considered the potential impacts of revising the particulate matter NAAQS on small entity groups and included a detailed discussion of that effort in Section V.F. of the RIA. The reader is referred to that discussion for further details.

C. Impact on Reporting Requirements

The revisions to Parts 51 and 52 were submitted to the Office of Management and Budget (OMB) for review as required by EO 12291. The reporting and recordkeeping provision addressed in this notice, moreover, have been submitted separately for review by OMB

under section 3504(b) of the Paperwork Reduction Act of 1980, U.S.C. 3501 et seq. The OMB comments and EPA responses to those comments are available for public inspection in the docket for this action.

List of Subjects

40 CFR Part 51

Administrative practice and procedure, air pollution control, intergovernmental relations, reporting and recordkeeping requirements, hydrocarbons, ozone, carbon monoxide, sulfur oxides, nitrogen dioxide, lead, particulate matter, State implementation plans.

40 CFR Part 52

Air pollution control, ozone, sulfur oxides, nitrogen dioxide, lead, carbon monoxide, hydrocarbons, particulate matter.

Dated: June 2, 1987.

Lee M. Thomas,
Administrator.

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PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

For the reasons set forth in the preamble, EPA amends Part 51 of Chapter I of Title 40 of the Code of Federal Regulations as follows:

1. The authority citation for Part 51 is revised to read as follows:

Authority: This rulemaking is promulgated under authority of sections 101(b)(1), 110, 160-169, 171-178, and 301(a) of the Clean Air Act 42 U.S.C. 7401(b)(1), 7410, 7470-7479, 7501-7508, and 7601(a).

2. In § 51.100, paragraphs (oo), (pp), (qq), (rr) and (ss) are added to read as follows:

§ 51.100 Definitions.

* * * * *

(oo) "Particulate matter" means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.

(pp) "Particulate matter emissions" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method, specified in this chapter, or by a test method specified in an approved State implementation plan.

(qq) "PM₁₀" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based

on Appendix J of Part 50 of this chapter and designated in accordance with Part 53 of this chapter or by an equivalent method designated in accordance with Part 53 of this chapter.

(rr) "PM₁₀ emissions" means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method, specified in this chapter or by a test method specified in an approved State implementation plan.

(ss) "Total suspended particulate" means particulate matter as measured by the method described in Appendix B of Part 50 of this chapter.

3. In § 51.151, the third unnumbered subdivision beginning "sulfur dioxide and particulate matter combined" is removed and the second unnumbered subdivision beginning "particulate matter" is revised to read as follows:

§ 51.151 Significant harm levels.

PM₁₀—600 micrograms/cubic meter; 24-hour average.

Pollutant	Annual	Averaging time (hours)			
		24	8	3	1
SO ₂	1.0 µg/m ³	5 µg/m ³		25 µg/m ³	
PM ₁₀	1.0 µg/m ³	5 µg/m ³			
NO ₂	1.0 µg/m ³				
CO			0.5 mg/m ³		2 mg/m ³

(3) Such a program may include a provision which allows a proposed major source or major modification subject to paragraph (b) of this section to reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact where the major source or major modification would otherwise cause or contribute to a violation of any national ambient air quality standard. The plan shall require that, in the absence of such emission reductions, the State or local agency shall deny the proposed construction.

(4) The requirements of paragraph (b) of this section shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment pursuant to section 107 of the Act.

4. In § 51.165, the fourth entry in the list in paragraph (a)(1)(x) is removed and paragraph (b) is revised to read as follows:

§ 51.151 Permit requirements.

(b)(1) Each plan shall include a preconstruction review permit program or its equivalent to satisfy the requirements of section 110(a)(2)(D)(i) of the Act for any new major stationary source or major modification as defined in paragraphs (a)(1)(iv) and (v) of this section. Such a program shall apply to any such source or modification that would locate in any area designated as attainment or unclassifiable for any national ambient air quality standard pursuant to section 107 of the Act, when it would cause or contribute to a violation of any national ambient air quality standard.

(2) A major source or major modification will be considered to cause or contribute to a violation of a national ambient air quality standard when such source or modification would, at a minimum, exceed the following significance levels at any locality that does not or would not meet the applicable national standard:

Particulate matter: 25 tpy of particulate matter emissions. 15 tpy of PM₁₀ emissions.

Pollutant	Maximum allowable increases (micrograms per cubic meter)
Class I	
Particulate matter:	
TSP, annual geometric mean	5
TSP, 24-hr maximum	10
Class II	
Particulate matter:	
TSP, annual geometric mean	19
TSP, 24-hr maximum	37
Class III	
Particulate matter:	
TSP, annual geometric mean	37
TSP, 24-hr maximum	75

(i) ***

(8) ***

(i) ***

(c) Particulate matter—10 µg/m³ TSP, 24-hour average.—10 µg/m³ PM₁₀, 24-hour average.

(f) Lead—0.1 µg/m³, 3-month average.

(h) Beryllium—0.001 µg/m³, 24-hour average:

(l) Hydrogen sulfide—0.2 µg/m³, 1-hour average:

(10) If EPA approves a plan revision under § 51.166 as in effect before July 31, 1987, any subsequent revision which meets the requirements of this section may contain transition provisions which parallel the transition provisions of § 52.21 (i)(11)(i)(iii), and (m)(1)(vii) and (viii) of this chapter as in effect on that date, these provisions being related to monitoring requirements for particulate matter. Any such subsequent revision may not contain any transition provision which in the context of the revision would operate any less stringently than would its counterpart in § 52.21 of this chapter.

(p) ***

(4) ***

Pollutant	Maximum allowable increases (micrograms per cubic meter)
Particulate matter:	
TSP, annual geometric mean	19
TSP, 24-hr maximum	37

5. In § 51.166, paragraph (a)(6)(i) is revised, the fourth entry in the list in paragraph (b)(23)(i) is revised, the entries under the headings "Particulate matter" in the tables in paragraphs (c) and (p)(4) are revised, paragraphs (i)(8)(i) (c), (f), (h), and (l) are revised, and new paragraph (i)(10) is added to read as follows:

§ 51.166 Prevention of significant deterioration of air quality.

(a) ***

(6) ***

(i) Any State required to revise its implementation plan by reason of an amendment to this section, including any amendment adopted simultaneously with this paragraph, shall adopt and submit such plan revision to the Administrator for approval within 9 months after the effective date of the new amendments.

(b) ***

(23)(i) ***

Pollutant	Maximum allowable increases (micrograms per cubic meter)
.....

6. In § 51.322, paragraphs (a)(1) and (b)(1) are revised to read as follows:

§ 51.322 Sources subject to emissions reporting.

(a) * * *

(1) For particulate matter, PM₁₀, sulfur oxides, VOC and nitrogen oxides, any facility that actually emits a total of 90.7 metric tons (100 tons) per year or more of any one pollutant. For particulate matter emissions, the reporting requirement ends with the reporting of calendar year 1987 emissions. For PM₁₀ emissions, the reporting requirement begins with the reporting of calendar year 1988 emissions.

(b) * * *

(1) For particulate matter, PM₁₀, sulfur oxides, VOC and nitrogen oxides, 22.7 metric tons (25 tons) per year or more. For particulate matter, the reporting requirement ends with the reporting of calendar year 1987 emissions. For PM₁₀, the reporting requirement begins with the reporting of calendar year 1988 emissions.

7. In § 51.323, paragraphs (a)(1) and (a)(2) are revised and paragraph (a)(3) is added to read as follows:

§ 51.323 Reportable emissions data and information.

(a) * * *

(1) Emissions of particulate matter, sulfur oxides, carbon monoxide, nitrogen oxides, and VOC as specified by AEROS Users Manual, Vol. II (EPA 450/2-76-029, OAQPS No. 1.2-039) to be coded into the National Emissions Data System point source coding form,

(2) Emissions of lead or lead compounds measured as elemental lead as specified by AEROS Users Manual, Vol. II (EPA 450/2-76-029, OAQPS No. 1.2-039) to be coded into the Hazardous and Trace Emissions System points source coding forms, and

(3) Emissions of PM₁₀ as will be specified in a future guideline.

8. In Appendix L, paragraphs 1.1 (b), (c), and (d) are amended by removing the unnumbered subdivisions beginning "SO₂ and particulate combined" and by revising the unnumbered subdivisions beginning "Particulate" to read as follows:

Appendix L—[Amended]

APPENDIX L—EXAMPLE REGULATIONS FOR PREVENTION OF AIR POLLUTION EMERGENCY EPISODES

- 1.1 * * *
- (b) * * *
- PM₁₀—350 µg/m³, 24-hour average.
- (c) * * *
- PM₁₀—420 µg/m³, 24-hour average.
- (d) * * *
- PM₁₀—500 µg/m³, 24-hour average.

Appendix S—[Amended]

9. In Appendix S, the fourth line beginning "Particulate matter" in the list in section 11.A.10(i) is amended by adding the words "of particulate matter emissions" after the words "25 tpy."

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

For the reasons set out in the preamble, Part 52 of Chapter I of Title 40 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7642.

2. In § 52.21, the fourth item in the table in paragraph (b)(23)(i) is revised; the entries under the heading "Particulate matter" in the tables in paragraphs (c) and (p)(5) are revised; paragraphs (i)(4) (ix) and (x) are added; the third, sixth, eighth, and twelfth items in the list in paragraph (i)(8)(i) are revised; paragraph (i)(11), and paragraphs (m)(1)(vii) and (viii) are added; and paragraph (w)(2) is revised as follows:

§ 52.21 Prevention of significant deterioration of air quality.

- * * * * *
- (b) Definitions. * * *
- (23)(i) * * *

Particulate matter: 25 tpy of particulate matter emissions; 15 tpy of PM₁₀ emissions.

- * * * * *
- (c) * * *

Pollutant	Maximum allowable increases (micrograms per cubic meter)
.....
Class I
Particulate matter:
TSP, annual geometric mean	5
TSP, 24-hr maximum	10

Pollutant	Maximum allowable increases (micrograms per cubic meter)
.....
Class II
Particulate matter:
TSP, annual geometric mean	19
TSP, 24-hr maximum	37
Class III
Particulate matter:
TSP, annual geometric mean	37
TSP, 24-hr maximum	75

- * * * * *
- (i) * * *
- (4) * * *

(ix) The source or modification was not subject to § 52.21, with respect to particulate matter, as in effect before July 31, 1987, and the owner or operator:

(a) Obtained all final Federal, State, and local preconstruction approvals or permits necessary under the applicable State implementation plan before July 31, 1987.

(b) Commenced construction within 18 months after July 31, 1987, or any earlier time required under the State implementation plan; and

(c) Did not discontinue construction for a period of 18 months or more and completed construction within a reasonable period of time;

(x) The source or modification was subject to 40 CFR 52.21, with respect to particulate matter, as in effect before July 31, 1987 and the owner or operator submitted an application for a permit under this section before that date, and the Administrator subsequently determines that the application as submitted was complete with respect to the particulate matter requirements then in effect in this section. Instead, the requirements of paragraphs (j) through (r) of this section that were in effect before July 31, 1987 shall apply to such source or modification.

- * * * * *
- (8) * * *
- (i) * * *

Particulate matter:

10 µg/m³ of TSP, 24-hour average.

10 µg/m³ of PM₁₀, 24-hour average;

* * * * *

Lead—0.1 µg/m³, 3-month average;

* * * * *

Beryllium—0.001 µg/m³, 24-hour average;

* * * * *

Hydrogen sulfide—0.2 $\mu\text{g}/\text{m}^3$, 1-hour average;

(11)(i) At the discretion of the Administrator, the requirements for air quality monitoring of PM_{10} in paragraphs (m)(1)(i)–(iv) of this section may not apply to a particular source or modification when the owner or operator of the source or modification submits an application for a permit under this section on or before June 1, 1988 and the Administrator subsequently determines that the application as submitted before that date was complete, except with respect to the requirements for monitoring particulate matter in paragraphs (m)(1)(i)–(iv).

(ii) The requirements for air quality monitoring of PM_{10} in paragraphs (m)(1)(iii) and (iv) and (m)(3) of this section shall apply to a particular source or modification if the owner or operator of the source or modification submits an application for a permit under this section after June 1, 1988 and no later than December 1, 1988. The data shall have been gathered over at least the period from February 1, 1988 to the date the application becomes otherwise complete in accordance with the provisions set forth under paragraph (m)(1)(viii) of this section, except that if the Administrator determines that a complete and adequate analysis can be

accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that paragraph (m)(1)(iii) requires shall have been gathered over that shorter period.

(m) *Air quality analysis.*

(1) * * *

(vii) For any application that becomes complete, except as to the requirements of paragraph (m)(1)(iii) and (iv) pertaining to PM_{10} , after December 1, 1988 and no later than August 1, 1988 the data that paragraph (m)(1)(iii) requires shall have been gathered over at least the period from August 1, 1988 to the date the application becomes otherwise complete, except that if the Administrator determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that paragraph (m)(1)(iii) requires shall have been gathered over that shorter period.

(viii) With respect to any requirements for air quality monitoring of PM_{10} under paragraphs (i)(11)(i) and (ii) of this section, the owner or operator of the source or modification shall use a monitoring method approved by the Administrator and shall estimate the ambient concentrations of PM_{10} using the data collected by such approved monitoring method in accordance with

estimating procedures approved by the Administrator.

(p) * * *

(5) * * *

Pollutant	Maximum allowable increases (micrograms per cubic meter)
Particulate matter:	
TSP, annual geometric mean	19
TSP 24-hr maximum	37

(w) *Permit rescission.* * * *

(2) Any owner or operator of a stationary source or modification who holds a permit for the source or modification which was issued under § 52.21 as in effect on July 30, 1987, or any earlier version of this section, may request that the Administrator rescind the permit or a particular portion of the permit.

§ 52.24 [Amended]

3. In § 52.24, paragraph (f)(10) is amended by removing the fourth entry, beginning "Particulate matter," from the list of significant emission rates.

[FR Doc. 87-13709 Filed 6-30-87; 8:45 am]

BILLING CODE 6560-50-M